

Final

**Remedial Investigation
Report**

Phase I & II

Medley Farm Site

Gaffney, South Carolina

Volume II

February 1991

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ENVIRONMENTAL
CONSULTANTS**



10908431

APPENDIX A
PROJECT OPERATIONS PLAN
AND APPROVAL

EQUIPMENT DECONTAMINATION

5.1.7.2 Decontamination of Drilling, Hydraulic Testing and Excavating Equipment

Equipment used for test pit excavation, soil or rock drilling, monitoring well installation and development or hydraulic testing will be cleaned and handled in accordance with the following guidelines:

1. Backhoes, drill rigs and all support equipment shall be free from excess grease, oils, and caked-on soils from previous work prior to arrival at the site. Equipment which leaks fuel, coolant, and lubricants shall be removed from the site and repaired prior to use.
2. The work area of drill rigs and all downhole tools and equipment shall be cleaned with high pressure steam (water at 200 degrees F and 1500 psi) cleaning equipment using potable water from a treated municipal supply at the commencement and completion of the work and between boring or well locations. Backhoes used for test pit excavation shall be cleaned in the same manner. During initial drilling activities rinsate samples will be taken of downhole equipment to confirm the effectiveness of the cleaning procedures.
3. Equipment or materials not used immediately after decontamination will be placed on a plastic sheet, covered with plastic and secured to avoid potential contamination.
4. Equipment such as pumps, flow lines, etc. will be flushed thoroughly with potable water from a treated municipal supply prior to use.

5.1.7.3 Decontamination of Well Casings, Screens and Centralizers

All well casings and screens shall be transported to the site and stored at the site in their original factory plastic wrapping until needed for well construction. Well casings, wells screens and centralizers shall be cleaned

EQUIPMENT DECONTAMINATION

thoroughly immediately prior to well construction by washing inside and out with a solution of potable water from a treated municipal supply and a standard brand of phosphate-free laboratory detergent such as alquinox or Liquinox. This shall be followed by high pressure steam cleaning with equipment which will deliver water at a minimum temperature of 200 degrees F and pressure of 1500 psi.

5.1.7.4 Sampling Equipment Decontamination

Sampling equipment (split spoons, hand augers, trowels, mixing bowls, bailers, etc.) which will be used at multiple sampling locations will be cleaned in the field after each use, in accordance with the following cleaning procedures:

1. Clean with tap water and phosphate-free laboratory detergent, (Liquinox or equivalent) using a brush if necessary to remove particulate matter and surface films.
2. Rinse thoroughly with tap water.
3. Rinse thoroughly with deionized water.
4. Rinse two times with pesticide grade isopropanol solvent and allow to air dry for as long as possible.
5. Rinse thoroughly with deionized or organic-free water and allow to air dry for as long as possible.
6. Wrap equipment completely with aluminum foil or polyethylene bags, to prevent contamination if equipment is to be stored or transported.

All sampling equipment and instrumentation will be cleaned at the SEC laboratory according to the procedures described above prior to travel to the site except that hot water will be used during steps 1 and 2 and equipment will be allowed to air dry following the solvent rinse for a

EQUIPMENT DECONTAMINATION

minimum of 24 hours. Teflon bailers shall also be subjected to a rinse with a 10 percent nitric acid solution followed by an additional tap water rinse in the lab following step no. 2. Bailers will not be re-used in the field.

Personnel involved in removing and preserving soil samples for chemical analysis will wear surgical inner gloves with nitrile outer gloves. Outer gloves will be washed with soapy water and rinsed with distilled or deionized water immediately prior to collecting each sample. Outer gloves may be removed and a new pair of inner gloves may be donned for performing delicate procedures such as capping vials.

Isopropanol used for decontamination will be collected and allowed to evaporate. Any residual isopropanol that remains unevaporated will be properly packaged and disposed of in accordance with applicable regulations. Spent decontamination solutions will not be allowed to flow offsite.

5.1.7.5 Miscellaneous Equipment Cleaning Procedures

Equipment such as well sounders and measuring tapes used for water level measurement or well construction, pH and specific conductivity meter probes, and submersible pumps used for well purging shall be cleaned using the following procedures:

1. Wash with laboratory detergent and tap water.
2. Rinse with tap water.
3. Rinse with deionized water.
4. Store equipment in a polyethylene bag or wrap with polyethylene film to prevent contamination during storage or from transit.

TEST PIT EXCAVATION AND SAMPLING

The test pits shall be excavated with a standard backhoe in accordance with Section 8.2 of "A Compendium of Superfund Field Operations Methods" (EPA/540/P-87/001). The final orientations and dimensions of test pits will be determined in the field based on observed conditions. Minimum test pit dimensions will be approximately 12 feet x 4 feet x 10 feet (l x w x d). Test pits located at former lagoon sites will be excavated to the depths required to fully penetrate fill placed during the emergency response action so that the underlying soils can be observed and sampled.

Four (4) grab samples shall be collected from the natural soils (fill placed during the emergency response action will not be sampled) excavated from each test pit. The grab samples from each test pit will be combined in the field by mixing in a glass or stainless steel pan to form one composite sample from each test pit for analysis. The grab samples shall be combined by mixing with a stainless steel spoon as described in Section 4.6.3.3.4 of the USEPA Region IV SOPQAM (1986). The volatile organics sample will be collected from each test pit prior to the other samples to minimize volatilization of organics. All rocks, twigs or foreign debris will be removed from the sample prior to homogenizing.

All samples collected from the test pits shall be selected from the most heavily contaminated soils exposed in each test pit, based on the results of screening with an organic vapor analyzer (OVA, HNu, or TIP II) and visual assessment. The samples shall be carefully selected from the material removed by the backhoe to assure that material which has come into contact with the backhoe bucket is not included. In addition, soil selected for sampling shall be trimmed with a stainless steel or teflon scoop prior to final sample collection. A separate stainless steel scoop shall then be used to collect the sample.

Soil samples collected from the eight (8) test pits excavated during Phase IA will be subjected to TCL analyses. Soil samples collected from the seven (7) test pit excavated during Phase IB will be analyzed for the indicator parameters identified at the completion of Phase IA.

TEST PIT EXCAVATION AND SAMPLING/MONITORING WELL INSTALLATION

Each test pit will be logged in the field book. Data recorded will include:

- o Name and location of job
- o Date of excavation
- o Approximate surface elevation
- o Total depth of excavation
- o Dimensions of pit
- o Method of sample acquisition
- o Type and size of samples
- o Soil and rock descriptions
- o Ground water occurrence
- o Organic vapor levels
- o Other pertinent information, such as waste material encountered

Final logs will be typed on the form included as Figure 5.4.

After logging, each test pit will be photographed and backfilled. The approximate location and orientation of each test pit will be plotted on the field plan and the location will be staked for future reference.

5.5.5 Equipment Decontamination

All equipment shall be decontaminated in accordance with the procedures described in Section 5.1.7.

5.6 MONITORING WELL INSTALLATION

5.6.1 Objectives and Schedule

Eight (8) ground water monitoring wells will be installed during the Phase IA field effort to characterize the hydrogeology at the site and to investigate the potential presence and nature of ground water contamination. Monitoring wells will generally be installed in pairs consisting of a water table well and a deeper bedrock well, to investigate the vertical extent of potential contamination. In a case where no appreciable water was encountered above bedrock, only one well will be installed at that location.

MONITORING WELL INSTALLATION

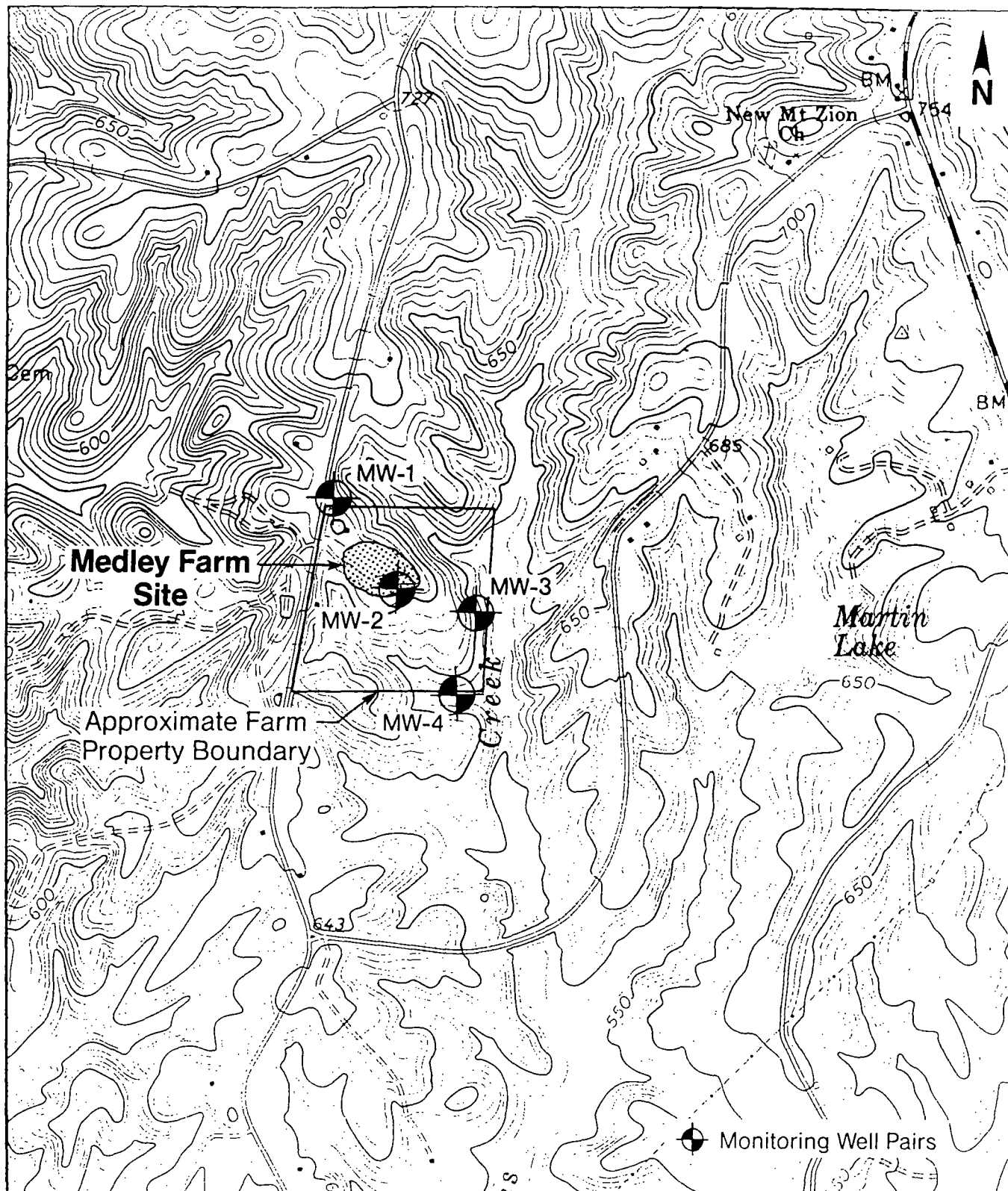
5.6.2 Monitoring Well Locations and Construction Details

The four (4) proposed well-pair locations are shown on Figure 5.5. The rationale for the selection of these locations is presented briefly below:

- o MW-1; this well pair is approximately 400 feet northwest of suspected disposal activities, in the presumed upgradient direction. The location of the upgradient well will be determined in part using the results of the soil gas survey. The well pair was placed between the site and Sprouse well to confirm that the private well contamination is not the result of site activities.
- o MW-2; this well pair is situated within the southeast boundary of the suspected disposal area. This location was selected to enable sampling of ground water immediately downgradient of former disposal and storage areas.
- o MW-3 and MW-4; these locations were selected to be downgradient from former site operations, along probable fracture traces which would constitute the most likely pathways for contaminant migration from the site.

These locations will be finalized after the soil gas survey data has been reviewed and the fracture trace analysis is completed using the 1 inch: 100 feet topographic site plan and aerial photographs.

A water table well and a deeper bedrock well will generally be installed at each location. The wells installed at each well pair location shall generally be spaced no greater than ten (10) feet apart. If ground water is not encountered in the saprolite at the proposed well pair locations, a single bedrock well will be completed to a depth of approximately 20 feet below the first occurrence of ground water at that location. The need for



USGS Pacolet Mills Quadrangle (1969)

Scale 1:14,100

Figure 5.5
**Proposed Locations of
 Groundwater Monitoring Well Pairs**

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MONITORING WELL INSTALLATION

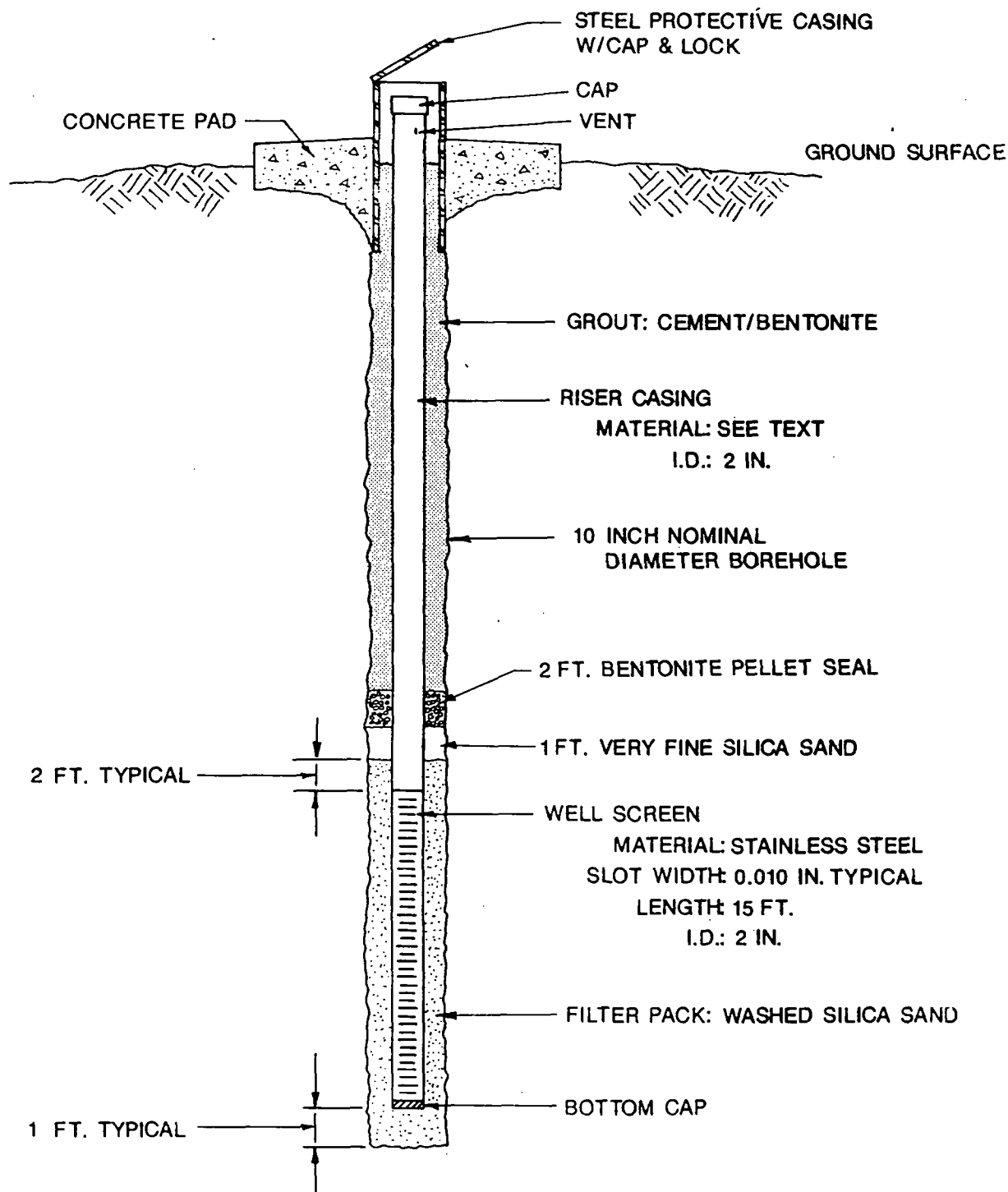
additional, deeper bedrock wells or alternate well locations will be assessed after completion of the Phase I RI field work. Where the water table occurs in the saprolite, the deeper well will be advanced to approximately 25 feet below auger refusal into the upper portion of the bedrock at a location adjacent to the saprolite well. Drill cuttings and drill rates will be monitored to establish the true depth to bedrock.

The saprolite well at each location will be abbreviated as SW and the bedrock well as BW for identification. The number of the well pair location will be maintained with the individual wells. For example, the bedrock well at well pair MW-3 will be called BW3.

Water table wells constructed in saprolite will consist of 15-foot-long, 2-inch I.D., type 304 stainless steel well screens set from approximately five (5) feet above to ten (10) feet below the water table. Screen slot widths shall generally be 0.010 inch unless grain size analyses of soil samples obtained from the adjacent boring for the companion bedrock well indicate that an alternate size should be selected. Sand packs will be constructed of washed silica sand compatible with the screen slot size such as Ottawa sand (ASTM C190). Riser pipe will consist of National Sanitation Foundation Potable Water Grade, Schedule 40 PVC. All piping will be flush joint and threaded and there will be no use of glue.

Bedrock wells will consist of four (4) inch I.D., type 304 stainless steel casing installed from ten (10) feet above the static water level encountered at the time of drilling to approximately five (5) feet into the bedrock (below auger refusal). Additional casing sections above the water level will consist of Schedule 40 PVC. A four (4) inch nominal diameter corehole will be drilled to approximately 20 feet below the bottom of the stainless steel casing. The cored sections will be left uncased to provide access for packer testing and ground water sampling.

Monitoring well installation permits will be obtained from SCDHEC prior to mobilization for well installation. Typical monitoring well construction details are included as Figure 5.6 and 5.7.

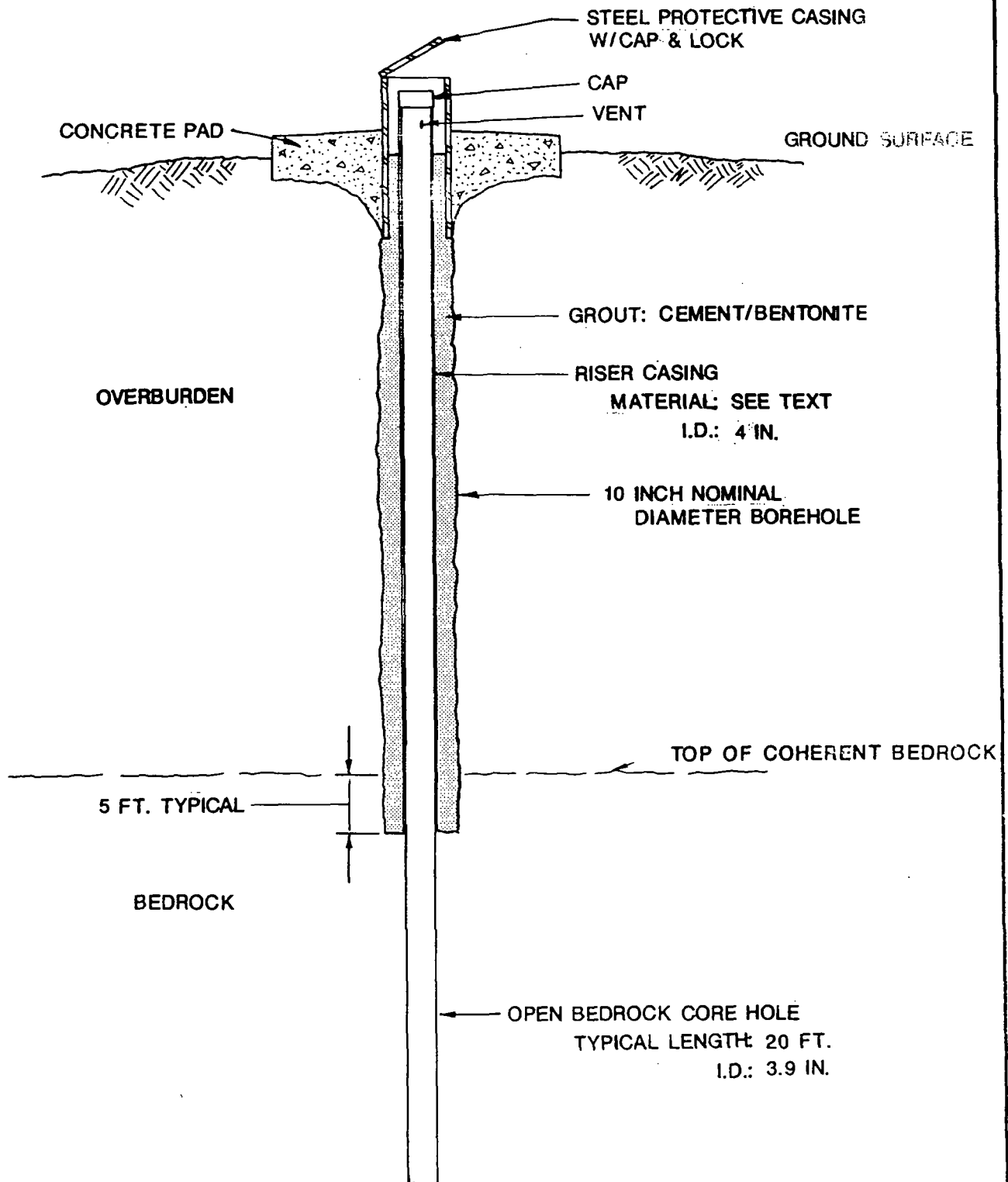


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MEDLEY FARM SITE RI/FS

TYPICAL MONITORING WELL DETAIL
SAPROLITE WELL

FIGURE 5.6



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MEDLEY FARM SITE RI/FS
TYPICAL MONITORING WELL DETAIL
BEDROCK WELL INSTALLATION

FIGURE 5.7

MONITORING WELL INSTALLATION

5.6.3 Task Team and Responsibilities

On-site Coordinator/Hydrogeologist - Field/office liaison

- Confirmation of well locations
- Log preparation
- Overall technical oversight
- Health and safety screening
- Subcontractor coordination

5.6.4 Equipment and Procedures

Equipment required for this task includes:

- o Drill rig and equipment
- o Decontamination equipment and supplies
- o Field logbook
- o OVA or HNu
- o Level C health and safety equipment

All drilling will be performed with conventional rotary drilling rigs fully equipped for dry auger and wet rotary drilling. An experienced geologist will continuously observe all drilling and well construction operations. All wells will be installed by a driller licensed in the State of South Carolina. No grease or oil shall be used on drill pipe joints, however teflon tape, vegetable oil or phosphate free laboratory detergent such as Liquinox may be used for lubrication.

Soil borings for monitoring well installation will be drilled using six-inch nominal I.D. (10 to 12-inch O.D.) hollow stem augers to provide ample annular space for quality well construction. A tri-cone roller bit or approved plug shall be maintained at the bottom of the augers, as they are advanced, to prevent cuttings from entering.

MONITORING WELL INSTALLATION

Soil samples for general site characterization will be obtained from one boring at each well pair location at 5-foot intervals using a standard 2-foot split spoon sampler driven in accordance with ASTM D-1586-67. In this manner the entire overburden thickness penetrated at each location will be sampled at 5-foot intervals. All soil samples will be identified in the field by an SEC geologist using visual/manual techniques described in ASTM D-2487 and D-2488. The soils will be classified in accordance with the Unified Soils Classification System and a log of each boring will be produced. Physical soils analyses will be conducted on selected samples obtained from these locations. The type and approximate number of tests to be performed is as follows:

<u>Test</u>	<u>ASTM Method</u>	<u>Estimated Quantity</u>
Natural Moisture Content	D-2216	12
Sieve Analysis	D-422	8
Hydrometer Analysis	D-422	4
Atterberg Limits	D-4318	8

All well materials will be steam cleaned immediately prior to installation. Clean, new disposable rubber gloves will be worn when handling well screens or casings. All well casing and screens will be transported to, and stored at the site in plastic wrap. Personnel handling these items will not handle tools or drilling equipment while installing the well.

The saprolite and bedrock wells will be installed as described below. Bedrock wells will be installed first so that the screen slot width and filter pack requirements of adjacent saprolite wells may be evaluated based on soil samples obtained while drilling the boring for the bedrock well.

Bedrock Wells

1. Advance the borehole with 6-inch I.D. hollow stem augers to auger refusal taking split spoon soil samples at five foot intervals. The moisture content of each soil sample will be visually assessed and noted on the log and frequent water level measurements will be taken

MONITORING WELL INSTALLATION

through the augers to approximate the static water level at the time of drilling.

2. Remove the augers from the borehole.
3. Advance the borehole to a minimum of five (5) feet below auger refusal using a 10 inch minimum diameter tri-cone roller bit. Potable water will be used as a drilling fluid, however sodium bentonite may be added to stabilize the borehole and remove drill cuttings if necessary. The actual depth to which this portion of the borehole will be advanced will be determined in the field based on drill advance to assure that competent bedrock is penetrated.
4. Measure all casing sections required and record all measurements in the field logbook.
5. Assemble the necessary sections of 4-inch casing and lower the casing to the bottom of the borehole. Centralizers will be attached at 30 foot intervals at this time.
6. Fill the annular space between the casing and the borehole walls with neat cement grout installed through a tremie pipe set at the bottom. Grout will consist of not more than seven (7) gallons of potable water per 94-pound bag of Portland Type I Cement (ASTM C150). Approximately 3% (by weight) bentonite powder will be added to improve flow and reduce shrinkage.
7. After the grout has been allowed to set for a minimum of 24 hours, the casing will be flushed out to the bottom with potable water using a 3-7/8 inch tri-cone roller bit.
8. The borehole will then be advanced into the bedrock by coring. The bedrock will be cored using an H-series double tube core barrel. The corehole produced with this barrel will be approximately 4 inches in diameter. A core barrel with a split inner barrel will be used to recovery and facilitate assessment of the bedrock structure. Core

MONITORING WELL INSTALLATION

runs will typically be five feet in length. Clear, potable water will be used as drilling fluid for coring. The volume of water pumped into the corehole while coring will be measured. Rock core recovered will be stored in 5-foot-long wooden core boxes until the project has been completed. The rock cores will be logged by a qualified SEC geologist. Logs will include detailed descriptions of bedrock lithology, grain size, texture, degree of weathering, hardness, color, and fracture characteristics. In addition, color photographs will be taken of the core.

The corehole shall be advanced approximately 20 feet below the bottom of the 4-inch stainless steel casing.

9. The corehole will be flushed thoroughly with potable water to removing any remaining cuttings at completion of the final core run.
10. The protective casing and concrete pad will be installed to complete the installation.

Saprolite Wells

1. Advance the borehole with 6-inch I.D. hollow stem augers to approximately 11 feet below the static water table.
2. The lengths of all screen and riser casing sections, bottom plugs, etc. will be measured and recorded.
3. The desired sections of 2-inch well screen and riser pipe will be assembled and lowered to the bottom of the borehole through the augers. Centralizers will be at the bottom of the well screen and at 30 foot intervals.
4. Washed silica filter sand will be poured via tremie pipe through the augers while the augers are pulled back incrementally to construct a continuous filter pack within the borehole annulus which will extend from approximately one (1) foot below the well screen to a minimum of

MONITORING WELL INSTALLATION

two (2) feet above the slotted section. The depth to the sand pack will be frequently measured through the augers using a properly decontaminated stainless steel weight attached to a fiberglass measuring tape to maintain the sand inside the augers as the filter pack is constructed.

5. A 2-foot-thick layer of very fine sand will be installed immediately above the filter pack of each well prior to installation of the bentonite seal. This very fine sand layer will consist of Foster-Dixiana BX-30 or equivalent. The low permeability of the fine sand will act as an additional safeguard to ensure that grout contamination of the filter pack adjacent to the well screen will not occur.
6. A 2-foot-thick bentonite seal will be constructed by pouring bentonite pellets through a tremie pipe into the annular space within the augers in the manner described above. Potable water will be added to the borehole at ten minute intervals to aid in the hydration of the bentonite seal. The bentonite seal will be allowed to hydrate for at least 30 minutes prior to placement of grout. Seal material will be placed in an above ground jar and hydrated to confirm the completeness of the hydration process before proceeding.
7. Tremie grout the remaining annular space from the bottom up with neat cement grout as described for bedrock well installation.
8. Remove the augers from the ground and top off the grout.
9. After allowing the grout to set approximately 16 hours, install the protective casing and concrete pad to complete the installation.

Final well construction details will be typed on the form included as Figure 5.8. Final bedrock core descriptions will be presented on the form included as Figure 5.9. Test boring logs used for final presentation of standard test boring data are described in Section 5.7.4.

MONITORING WELL INSTALLATION

5.6.5 Well Development

Well development will be conducted within two weeks after each well has been constructed, but no sooner than 48 hours after grouting is completed. Well development will be accomplished by a combination of methods which shall include manual pumping and surging with a PVC hand pump or pumping with a submersible PVC and stainless steel pump. As the wells are developed, ground water temperature, pH, and specific conductance will be monitored as indicator parameters. The turbidity of the developed water will be noted visually and recorded in the field log book. Well development will continue until indicator parameters are stable ($< 10\%$ change between four consecutive measurements) and the water is free of suspended sediments. At a minimum, a volume of water equal to that introduced during drilling will be removed from the well.

5.6.6 Equipment Decontamination

All equipment shall be decontaminated in accordance with procedures described in Section 5.1.7.

5.6.7 Disposal of Excess Cuttings and Drilling Fluids

Drill cuttings, fluids used in drilling, and water purged from wells during development and sampling shall be disposed of on-site. Cuttings from boreholes shall be spread on the ground in the immediate vicinity of the respective drilling sites. Drilling fluids and water purged from wells shall be allowed to percolate into the ground in shallow depressions or holes dug to prevent runoff in the immediate vicinity of each drilling site. These areas shall be filled with the soil removed to create the depression/hole after completion of drilling and sampling activities.

SOIL BORINGS

Ground water monitoring well pair MW-2 will be placed within the southeast boundary of the suspected disposal area. This section of the suspected disposal area is outside of former lagoons and drum storage areas. The NUS geophysical survey indicates that the location for MW-2 is not within an anomalous zone. Nonetheless, an OVA will be used to monitor cuttings from the drilling as part of site health and safety precautions. Cuttings that are significantly above background readings will be containerized with ultimate disposal dependent on results of the MW-2 analyses.

5.7 SOIL BORINGS

5.7.1 Objectives and Schedule

Approximately 12 soil borings will be drilled during Phase IB in suspected disposal and storage areas to further investigate the vertical and horizontal extent of contaminant sources. The soil borings will also supplement the hydrogeologic characterization of the site.

5.7.2 Sampling Locations and Frequency

The first boring will be drilled in an appropriate background location where samples will be collected for determining background levels of metals and pesticides. Six (6) borings will subsequently be drilled through suspected former lagoon areas. Five additional borings will be placed in the most apparently contaminated former drum storage areas as indicated by the soil gas survey conducted in Phase IA. All soil boring locations will be selected at the completion of Phase IA based on the results of the soil gas survey, analyses of soil samples collected from test pits and existing evidence of former lagoon and drum storage area locations.

Each boring will be advanced to a depth of 25 feet. Soil samples will be collected at five foot intervals from each boring as described in Section 5.6.4.

SOIL BORINGS

5.7.3 Task Team and Responsibilities

On-site Coordinator/Geologist - Field/office liaison

- Confirmation of boring locations
- Log preparation
- Overall technical oversight
- Subcontractor coordination

Technician

- Health and safety screening
- Sample packaging and shipment
- Assistance with record keeping

5.7.4 Equipment and Procedures

Equipment required for this task includes:

- o Drill rig and equipment
- o Stainless steel split spoon samplers
- o Decontamination equipment and supplies
- o Field logbook
- o OVA or HNu
- o Level C health and safety equipment
- o Sample containers
- o Stainless steel utensils
- o Engineers rule

The soil borings will be drilled with hollow stem augers. A tri-cone roller bit or approved plug shall be maintained at the bottom of the augers as they are advanced to prevent cuttings from entering. Split spoon soil samples will be collected at five foot intervals by driving a two-foot-long stainless steel split spoon assembly in accordance with ASTM D-1586-67.

Each split spoon sample collected for chemical analyses will be taken according to the following procedure:

1. Decontaminate sampler as specified in Section 5.1.7.

SOIL BORINGS

2. Drive sampler 24 inches with a 140-pound hammer falling 30 inches.
3. Sample aliquots for chemical analyses will be immediately removed from the split spoon sampler using a decontaminated stainless steel spatula, scoop or teaspoon and placed in the appropriate pre-labeled containers provided by the analytical laboratory. Aliquots for volatile organic analyses shall be collected first.
4. Store all sample aliquots for chemical analyses at 4°C.

A portion of each split spoon sample will also be collected for field screening with an organic vapor analyzer. The samples collected for organic vapor screening will be placed in 8 ounce jars so that approximately 2-1/2 inches of headspace remains. The top of the jar will be immediately covered with aluminum foil and the jar lid will be tightly closed to seal the jar. The jars will then be shaken thoroughly and stored in a location protected from direct sunlight or extremely high or low temperatures. The soil samples will be allowed to sit for at least one-half hour prior to headspace screening. Headspace screening will be performed by penetrating the aluminum foil jar cover with the sampling probe of the organic vapor analyzer to extract the gas for analysis. Clean soil sample jars (every tenth jar) will be sealed empty and screened to confirm jar cleanliness. Each jar will be labeled to identify the boring number, sample number, depth of sample and the time each sample was obtained. The results of organic vapor screening, including the ambient air temperature at the time screening was conducted, the time each sample was screened, and the background reading on the organic vapor analyzer immediately prior to screening, will be recorded on the log form shown in Figure 5.10.

Within the suspected lagoon areas, or other potential waste disposal areas, soil boring samples collected from depths of 10, 15 and 25 feet will be sent to the laboratory for analysis of indicator parameters. Samples from above 10 feet will not be analyzed from these borings which will be drilled in areas where samples obtained from test pits will provide near surface characterization. If laboratory analyses of samples obtained from 10 and 15

SOIL BORINGS

feet show no contamination, the sample at 25 feet will be discarded at the laboratory. Otherwise, all three samples will be subjected to individual laboratory analyses. All samples will also be subjected to field screening using an organic vapor analyzer as described previously. Results of the field screening will be recorded for correlation with laboratory analytical results.

Soil samples outside of waste disposal or lagoon sites will be collected at 5, 15, and 25 feet for the analysis of indicator parameters determined in Phase IA. If laboratory analyses of samples obtained from 5 and 15 feet show no contamination, the sample at 25 feet will be discarded at the laboratory. Otherwise, all three samples will be analyzed.

All soil samples will be identified in the field by a geologist using visual/manual techniques described in ASTM D-2487 and D-2488. The soils will be classified in accordance with the Unified Soils Classification System and final log of each boring will be typed on the SEC Test Boring Report included as Figure 5.11. The results of organic vapor screening will also be included on the test boring logs.

Physical soils analyses will be conducted on selected soil samples obtained from the test borings to confirm soil classifications made in the field and to provide data for the estimation of hydraulic conductivities. The type, procedures and an estimate of the number of tests which will be performed are summarized below:

<u>Test</u>	<u>ASTM Method</u>	<u>Estimated Quantity</u>
Natural Moisture Content	D-2216	24
Sieve Analysis	D-422	12
Atterberg Limits	D-4318	6

5.7.5 Equipment Decontamination

Equipment will be decontaminated in accordance with the procedures described in Section 5.1.7.

GROUND WATER SAMPLING

5.7.6 Borehole Abandonment and Disposal of Excess Cuttings

All boreholes will be abandoned by tremie grouting with cement/bentonite grout. Cuttings from boreholes shall be spread thinly over the ground surface in the immediate vicinity of the respective drilling sites.

5.8 GROUND WATER SAMPLING

5.8.1 Objectives and Schedule/Sampling Locations and Frequency

One set of ground water samples will be collected from surficial and bedrock monitoring wells at MW-2 and MW-4 during Phase IA. These four (4) sets of samples will be analyzed for the complete list of TCL and TAL parameters to assist in finalizing the site specific list of indicator parameters to be utilized in Phase IB sampling efforts. One set of samples will be collected from the wells installed at MW-1 and MW-3 along with the wells at MW-2 and MW-4 during Phase IB. The eight (8) sets of samples collected during Phase IB will be analyzed for the indicator parameter list. Ground water samples will be obtained in accordance with EPA Region IV protocols. The ground water analyses will be evaluated to assess potential impacts to ground water at the site.

5.8.2 Sampling Locations and Analytical Requirements

Monitoring well locations are shown on Figure 5.5 (section 5.6.2).

Analytical requirements are discussed above and in section 5.1.3.

5.8.3 Task Team and Responsibilities

On-site Coordinator/Sampling Specialist	- Field/office liaison - Overall technical oversight
Technician	- Health and safety screening - General support

GROUND WATER SAMPLING

5.8.4 Equipment and Procedures

Equipment required for this test includes:

- o Field logbook
- o pH meter/calibration standards
- o Thermometer
- o Conductivity meter
- o Water level indicator
- o Purge pump
- o Generator
- o Closed top bailers - teflon
- o Polypropylene cord
- o Fiberglass measuring tape and stainless steel weight
- o Sample containers and labels
- o Sample packaging and shipping equipment
- o Sample document control and shipping forms
- o Decontamination solutions and equipment
- o Organic vapor analyzer
- o Level C health and safety equipment

The SEC Field Data Information Log (Figure 5.12) will be used to record all measurements made during well purging and sampling. This form was designed to be used as a checklist and as documentation for all ground water sampling activities for an individual well. Information to be recorded on this form will include:

- | | |
|----------------------|------------------------------|
| o data | o field personnel |
| o site/facility name | o well identification |
| o weather conditions | o total well depth |
| o ground water depth | o well diameter |
| o casing material | o well volume calculation |
| o evacuation method | o well integrity |
| o field pH | o field specific conductance |
| o field Eh | o water temperature |

GROUND WATER SAMPLING

Completed Field Data Information Logs will be included for each well in the RI Report for this investigation. Sampling activities will also be documented in the field logbook.

Prior to the initiating of any activities at each well site, all sampling personnel will don new, laboratory grade gloves. These gloves will be replaced as necessary during well evacuation and sampling, and always changed between wells.

When the well is opened for sampling, any odors detected will be noted and the presence of organic vapors will be screened using an organic vapor analyzer.

5.8.4.1 Well Evacuation

Each well will be purged prior to sample collection to remove any stagnant water from the well, thereby ensuring that the samples collected are representative of the water quality surrounding each well. Prior to well evacuation or sample collection, the ground water depth is determined using an electronic water level meter as described in Section 5.10. Following each use, the instrument is cleaned according to the field cleaning procedure described in Section 5.1.7.

For wells that recover quickly, three to five volumes of water are removed. Specific conductance, pH, and water temperature will be measured periodically during well evacuation. Wells that can be evacuated to dryness with less than five well volumes being removed will be sampled as soon as the well has recovered enough to yield sufficient volume for a sample.

Well purging will be accomplished using teflon bailers or submersible pumps. Purging techniques will be in accordance with procedures described in section 4.7.5.3 of the EPA Region IV SOPQAM (April, 1986). The volume of water to be evacuated is calculated using the following equation:

GROUND WATER SAMPLING

$$V = TT r^2 h$$

where:

$$TT = 3.14159$$

r = radius of well casing

h = height of water column in well (Total well depth - depth to ground water prior to purging.)

V = volume of water in well

$$\text{Minimum Purge Volume} = V \times 5$$

5.8.4.2 Sample Collection

1. After the well has been purged, collect the sample within 3 hours with the bailer. The sample containers will be filled directly from the bailer. Volatile organic samples will be collected first.
2. Measure and record in log book the pH, temperature, and specific conductance of the sample. These measurements may be taken from a sample collected in an additional container. All instrument calibrations will also be recorded. Visual characteristics of the sample, including insoluble materials, will be recorded.
3. Add chemical preservatives to sample bottles, if applicable.
4. Secure caps on bottles with laboratory-supplied custody tape.
5. Place VOC samples in plastic bags and seal.
6. Complete documentation for all samples.
7. Pack samples in coolers with ice pack samples for shipment.
8. Complete appropriate sections of chain-of-custody. Place custody sent around cooler.
9. Ship samples to analytical laboratories within 24 hrs.

SURFACE WATER AND SEDIMENT SAMPLING

10. Advise subcontracted laboratory of sample shipment.

5.8.5 Equipment Decontamination

Equipment shall be decontaminated in accordance with procedures described in Section 5.1.7. Purge pump tubing which has been submerged during well evacuation and all bailer cord will be discarded between well locations.

5.8.6 Disposal of Water Purged From Wells

Water purged from monitoring wells prior to sampling shall be handled as described in Section 5.6.7.

5.9 SURFACE WATER AND SEDIMENT SAMPLING

5.9.1 Objectives and Schedule

Surface water and sediment samples will be collected to determine the presence or absence of contaminants in these media and to compare the quality of surface water and bottom sediments entering and leaving the site. All surface water and sediment sampling will be conducted during Phase IB of the RI.

5.9.2 Sampling Locations and Analytical Requirements

Surface water and sediment samples will be obtained from four (4) locations. Approximate sampling locations are shown on Figure 5.13. The rationale for the selection of these locations is presented briefly below:

- o RW-1/SS-1; this location is upgradient from the site. These samples will define background surface water and stream sediment conditions in Jones Creek.

SURFACE WATER AND SEDIMENT SAMPLING

- o Thermometer
- o Conductivity meter
- o Engineers rule
- o Stainless steel spoons or spatulas
- o Hand auger with stainless steel bucket
- o Stainless steel trowel or scoop
- o Pyrex glass or stainless steel mixing bowls
- o Sample containers and labels
- o Coolers with ice packs
- o Sample document control forms
- o Decontamination solutions and equipment
- o Level D health and safety equipment

All surface water samples will be collected prior to sediment samples to avoid the influx of sediment into the surface water samples.

5.9.4.1 Surface Water Sample Collection

The following procedures will be followed for collecting surface water samples:

1. Sketch sampling location in field logbook. Photograph location of sample collection.
2. Prepare sample bottles and labels and don uncontaminated gloves.
3. Collect water sample by lowering sample bottle(s) into water facing upstream allowing water to enter and fill container completely.
4. Add chemical preservatives, if applicable, and secure caps. Decontaminate sample bottle(s) and affix labels.
5. Place sample containers in coolers, packed with ice.
6. Measure and record physical characteristics of the water body

SURFACE WATER AND SEDIMENT SAMPLING

including: depth of water at sampling location, odor, color, turbidity, water temperature, pH, specific conductance and vegetation.

7. Complete appropriate portions of chain of custody.

5.9.4.2 Sediment Sample Collection

The following procedures will be followed for collecting stream sediment samples:

1. Sketch sampling location in field logbook.
2. Depending on the character and accessibility of the sediments, a stainless steel trowel or hand auger may be used to collect the samples.
3. If it is necessary to wade into the water, the team member collecting the sample will go downstream of the sample collection point to avoid disturbing sediments. Sampling will begin at the furthest downstream sampling point and proceed upstream to avoid disturbing bottom sediment at the sampling location.
4. Prepare sample containers and labels.
5. With a stainless steel or glass mixing bowl and sampling equipment ready, don uncontaminated gloves.
6. Collect sediment samples while facing upstream and deposit the sediments into the mixing bowl.
7. Homogenize the sample thoroughly but gently with a stainless steel spoon or spatula as described in Section 4.6.3.3.4 of the EPA Region IV SOPQAM (April 1986).
8. Transfer the sample aliquots to the appropriate pre-labeled sample containers and secure caps.

GROUND WATER LEVEL MEASUREMENT

9. Place sample containers in coolers packed with ice.
10. Measure and document in the field logbook physical characteristics of the sampling point including: depth of water at sampling point, soil description of sediment sampled, stream bed characteristics at sampling point, etc.
11. Complete appropriate portions of chain of custody.

Representative sampling points for surface water and sediment samples will be selected in accordance with the criteria described in Section 4.6.2.1 of the EPA Region IV SOPQAM (April 1986). Surface water sampling points where natural mixing occurs such as immediately below natural channel constrictions or riffles will be selected. Sediment samples will be collected from depositional areas such as inside river bends.

5.9.5 Equipment Decontamination

All sampling equipment will be decontaminated in accordance with the procedures described in Section 5.1.7.

5.10 GROUND WATER LEVEL MEASUREMENT

5.10.1 Objectives and Schedule

Water level measurements will be taken from all monitoring wells installed at the site during the Remedial Investigation and from the existing SCDHEC well (MDZA). Water level measurements will be made on a bi-monthly basis or more frequently during the RI to monitor water level fluctuations. Water level measurements will be taken from all monitoring wells at the site on the same day at least two times during the RI to provide two complete sets of comparable measurements. Surveyed elevations will be established at each well to determine water level elevations. These water level measurements will be used to calculate hydraulic gradients and determine directions of ground water flow at the site.

GROUND WATER LEVEL MEASUREMENT

5.10.2 Equipment and Procedures

All water level measurements will be made using an electronic water level meter. The water levels will be measured by slowly lowering the instrument probe into the well. When the probe reaches the water surface, the circuit is completed and a buzzer is activated. The distance from the top of the well casing to the water level is then measured and recorded. The water level indicator cable is calibrated in increments of 0.05 feet. Water levels will be estimated to nearest 0.01 feet.

All water level measurements will be recorded in the field logbook including: date and time of measurement, description of measuring point and the name of the individual making the measurement. When the well cap is removed, an organic vapor analyzer will be used to screen the air space immediately above the well casing. The level of vapors detected and any odors noted will also be recorded.

A history of all ground water level measurements taken during the RI will be maintained for each well on a Ground Water Level Monitoring Report (Figure 5.14). Complete sets of water level measurements taken on the same day will be recorded on the Water Level Summary Report (Figure 5.15).

5.10.3 Equipment Decontamination

All equipment will be decontaminated between wells in accordance with the procedures described in Section 5.1.7.

5.11 HYDRAULIC TESTING

5.11.1 Objectives and Schedule

In situ hydraulic testing will be used to evaluate the hydraulic characteristics of the saprolite and bedrock aquifers beneath the site.

SLUG TEST PROCEDURES

5.11.4 Equipment and Procedures

5.11.4.1 Slug Test Procedures

Equipment required for this task includes:

- o Field logbook
- o Data logger and water level transducers
- o Electronic water level tape
- o Displacement slug
- o Decontamination solution and equipment
- o Level D or C health and safety equipment (based on previous well site screening data)

Slug tests will be performed and evaluated in accordance with procedures described by Hvorslev (U.S. Army Bulletin #36). Rising head permeability tests rather than falling head tests will be performed in all saprolite/water table wells since an induced rise in water level would result in water running out into the unsaturated portion of the gravel pack resulting in inaccurate hydraulic conductivity estimates. A conservative range of permeability values can be obtained by subjecting each test to three methods of analysis. Methods described by Hvorslev (1951), Bower and Rice (1976) and Nguyen and Pinder (1984) will be used.

Procedures to be followed for performing slug tests outlined below:

1. Measure and record the depth to water with the electronic water level tape.
2. Install water level transducer in monitor well.
3. Record static water level. Check that it agrees with initial measurement.
4. Introduce slug into well.
5. Allow water level to stabilize.

WATER PRESSURE TEST PROCEDURES

6. Activate data logger and instantaneously remove slug.
7. Allow water level to stabilize.
8. Record data.

5.11.4.2 Water Pressure Test Procedures

Equipment required for this task includes:

- o Field logbook
- o Water pump
- o Water meter (measures flow to 0.1 gallons; calibrated)
- o Water pressure gauges (PSI; calibrated)
- o Pneumatic packer system
- o Surge tank (optional, depending on pump type)
- o Drill rig
- o Miscellaneous pipe, fittings and valves
- o Nitrogen tank with pressure regulator and two gauges
- o Air hose (reinforced)
- o Time piece
- o Engineers rule

Water pressure tests will be conducted using both double and single pneumatic packers in accordance with the general procedures described in the U.S. Bureau of Reclamations Ground Water Manual, 1977. Test zones will be determined by examining the retrieved bedrock cores. Each test zone will typically be tested at three approximately equal pressure steps to provide data for assessing the hydraulics of flow in the bedrock fractures. Maximum test pressures will be based on the available hydraulic head as determined from water level measurements made in wells constructed at the site.

5.11.4.3 Pump Tests

Equipment required for this task includes:



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

JAN 04 1990

4WD-SFB

Mr. Les Oakes
King & Spalding
2500 Trust Company Tower
Atlanta, GA 30303

Re: Approval of the Analytical Parameters and Phase IB Sampling Locations
for the Medley Farms Superfund Site

Dear Mr. Oakes:

The Agency received the document entitled "Proposed Analytical Parameters and Phase IB Sampling Locations", dated November 3, 1989, on November 7, 1989. Comments generated by the review of this document were sent to you in a correspondence dated November 30, 1989. In this correspondence the Agency highlighted several technical concerns and suggested the most expeditious means of resolving these concerns.

In response to the Agency's November 30, 1989 letter, Mr. James Chamness, who is with Sirrine Environmental Consultants (SEC), the potentially responsible parties' (PRPs') consultant, called me on December 5, 1989. Our discussion centered on these highlighted concerns. Enclosed is a "Communication Record" from Mr. Chamness that accurately reports our conversation. Based on the information provided by Mr. Chamness during this telephone conversation, I approved the identified analytical parameters and Phase IB sampling locations. SEC is to submit a revised Phase IB sampling and analytical plan to the Agency that reflects the changes required by the Agency's November 30, 1989 letter and my December 5, 1989 telephone conversation with Mr. Chamness. I anticipate receiving this revised plan in the near future.

In addition to confirming the approval of the analytical parameters and Phase IB sampling points, this correspondence will prevent any misunderstanding as to when the Agency approved Task 2.3 - EPA Approval of Indicator Parameters specified in Figure 6.1 of the Medley Farm Work Plan. The Agency's approval on Task 2.3 was provided to SEC on December 5, 1989 and therefore, that is the date Agency is using to estimate the submittal date for the draft Remedial Investigation (RI) report. According to the schedule in Figure 6.1 of the Medley Farm Work Plan, the draft RI report should be submitted to the Agency the week of February 19, 1990.

If you have any questions on the above, please call me at (404)347-7791.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "Jon K. Bornholm", followed by a horizontal line.

Jon K. Bornholm
Remedial Project Manager

Enclosure

cc: Knoll Simmons, Versar
Jim Chamness, SEC
Wayne Lee, EPA/ORC
Wes Caughman, SCDHEC

COMMUNICATION REPORT

Person Contacted Jon Bornholm Project No. G-8026
Company EPA-Region IV Date 12/5/89 Time 9:30am
Address Atlanta, Georgia Client Medley Farm Site PRPs
 Re Response to EPA comments
 on Proposed Phase IB
Telephone No. (404) 347-7791 Telephone Conversation X
Recorded By James S. Chamness Office Conversation

- In the comments from EPA dated 30 November, 1989, Mr. Bornholm (EPA Project Manager) indicated that a response by telephone to comments 4, 6 and 7 would be required prior to approval to proceed with the proposed Phase IB sampling and analytical plan. Based on the responses summarized below, Jon gave SEC approval to proceed:

Response to EPA Comment No:

4. Semi-volatile organic compounds were not detected in any ground-water samples analyzed during Phase IA at levels above SQLs. Compounds detected below SQLs consisted primarily of common laboratory artifacts. Therefore, semi-volatile organic analyses will not be performed on ground-water samples collected during Phase IB.

The ground-water samples (2) collected from the background wells (SW-1 and BW-1) will be analyzed for TAL Metals in addition to TCL volatile organic compounds.

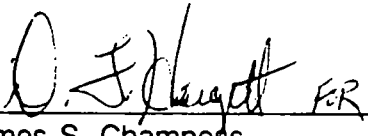
6. Soil samples will be collected for Dioxin analysis from soil borings drilled at the locations where test pits TP2 and TP4 were excavated. One sample will be collected for dioxin analysis of the natural soils immediately underlying the fill materials which may have been placed during the EPA emergency response action. Logs of test pits TP2 and TP4 will be used to determine appropriate sampling intervals. These two (2) soil samples will be composited and one (1) composite soil sample will be analyzed for dioxins by CLP Special Analytical Services.

December 6, 1989

Page 2

7. TP2 and TP4 were selected over test pits TP3 and TP9 as sampling locations for the Dioxin analyses for the following reasons: 1) trace levels (below SQLS) of pentachlorophenol, a potential dioxin precursor compound, was detected in samples TP2-1 and TP9-1. Since Aroclor 1254, another potential dioxin precursor was also detected in TP2-1, TP2 was selected as one of the dioxin sampling locations. Several dioxin related semi-volatile organic compounds were detected at low levels in TP4-1, since only one (1) dioxin related compound was detected in TP3-1, TP4 was selected as the second dioxin sampling location.
- Split samples will be collected by the EPA oversight contractor (Versar) from BW-1 and BW-3 (ground water) and RW-3 (surface water). Split samples will also be collected from selected soil boring samples.
 - SEC will prepare a written response to all EPA comments (dated on November 30) on the Phase IB sampling plan.
 - SEC intends to conduct Phase IB test pit excavation December 13-20. Ground-water, surface water and stream sediment samples may also be collected before Christmas. Soil borings will probably not be performed before the first week in January. Sirrine will contact Jon Bornholm to confirm schedules for field activities.

SIRRINE ENVIRONMENTAL CONSULTANTS, INC.



James S. Chamness

cc: Mr. Jon Bornholm - EPA, Region IV, Atlanta
Ms. Mary Jane Norville - King & Spalding
Mr. Ted Volario - National Starch
Mr. Phil Connor - Ogletree, Deakins, Nash, Smoak and Stewart
Project File

/rmb

MAY 23 1983

44D-SFB

Mr. Les Oakes
King & Spalding
2500 Trust Company Tower
Atlanta, GA 30303

Re: Agency's Approval to Proceed with Monitor Well Installation at the
Medley Farms Superfund Site

Dear Mr. Oakes:

By means of this letter the Agency is directing the Potentially Responsible Parties (PRPs) to have their contractor, Sirrine Environmental Consultants, proceed with the installation of monitor wells at the above referenced Superfund site. It is the Agency's understanding that well permits are forthcoming from the State of South Carolina Department of Health and Environmental Control (SCDHEC) depending on Sirrine's submission of a revised Project Operations Plan (POP) to SCDHEC and EPA. Even if well permits were not forthcoming, Sirrine is still to proceed with the installation of these monitor wells as the remedial investigation field work has been delayed long enough over this issue.

It is the Agency's desire to have the PRPs proceed with the installation of the monitor wells with or without the State's well permits. This is feasible as Superfund is only required to meet the technical requirements of ARARs, which is the category that the State's well permitting process falls into. Sirrine has assured the Agency that the design and construction of the monitor wells at the Medley Farm site satisfies the State's technical requirements for issuing a well permit. This provision, however, only holds true for activities conducted on-site. Therefore, it will be necessary to obtain a permit for the bedrock monitor well to be installed at MW-3 as this spot is located off-site. The time required to install the other wells should provide Sirrine sufficient time to attain a State permit for this bedrock well.

Both the Agency and Sirrine have been in contact with the State in attempts to rectify this situation. Last week, SCDHEC proposed the relocation of two (2) saprolite wells. The Agency concurs with the relocations, as proposed by SCDHEC. These saprolite monitor wells were originally to be located at MW-3 and MW-4. The new well locations are one to the east of the paired wells at MW-2 and the other to the north of MW-2. Both of these new locations will be in close proximity to the boundary of the former disposal area. The location and rationale for relocating these 2 saprolite monitor wells is the only change to be incorporated in the revised POP.

I have been in contact with Sirrine and have informed them of the issuance of this directive. The driller they have subcontracted is to mobilize and initiate drilling activities the week of May 22, 1989.

If you have any questions, please contact me at 347-7791.

Sincerely yours,

Jon K. Bornholm
Superfund Project Manager

cc: Wayne Lee, OPC
Lynn Martin, ECDHEC
Gordon Peterson, Sirrine



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

348 COURTLAND STREET
ATLANTA, GEORGIA 30363

MAY 16 1989

4WD-SFB

Mr. Les Oakes
King & Spalding
2500 Trust Company Tower
Atlanta, GA 30303

Re: Approval of Medley Farms Project Operations Plan
with Caveat on Cleaning Procedures for Drilling
(Down-hole) Equipment

Dear Mr. Oakes:

I shared Sirrine's April 21, 1989 letter with Region IV Environmental Services Division (ESD). ESD is in agreement with the language in Sirrine's letter. The Medley Farm Work Plan dated August 1988 and Project Operations Plan (POP) dated January 1989 are approved with the understanding that an alternate cleaning procedure will be used to decon the drilling (down-hole) equipment. It is also the Agency's understanding that additional rinsate samples for quality control/quality assurance purposes will be collected during the cleaning process for analysis. If this is your understanding as well, no response is necessary from the Potentially Responsible Parties.

Sincerely yours,

A handwritten signature in dark ink, appearing to read "Jon K. Bornholm", is written over the typed name.

Jon K. Bornholm
Superfund Project Manager

cc: Ken Barry, Versar
Donald Hunter, ESD
Coleman Miles, Jr., SCDHEC
Gordon Peterson, Sirrine



Post Office Box 24000
Greenville, South Carolina 29616
(803) 234-3000

April 21, 1989

Mr. Jon Bornholm
USEPA - Region IV
Superfund Project Manager
345 Courtland Street
Atlanta, GA 30365

Re: Medley Farms Site POP - G8026

Dear Jon:

After discussing your letter of April 4, 1989 on the POP for the Medley Farms Site with the PRP's it was determined that further clarification was in order before proceeding with the field activities. Concerns were raised as to the interpretation that could be made of your response letter. Both SIRRINE and the PRP's want to ensure that we are clearly understanding EPA's position on the field cleaning procedures. It is our understanding that all elements of the Work Plan and POP have been approved with the exception of the field cleaning procedures for the "downhole" drilling equipment. As a point of clarification, the POP has been amended to utilize the ESD suggested cleaning protocols for all sampling equipment split spoons, hand augers, etc. A limited number of installations are being made at this site. In addition, the nature of the site is such that the staging of facilities for large equipment isopropanol rinses, storage of equipment, storage of chemicals and waste drums is difficult. No buildings or covered facilities are available. With this in mind, the costs of the additional rinsing for drilling equipment would become a significant portion of the overall costs. On numerous other sites under various regulatory programs, SEC has found careful steam cleaning as an acceptable method of preparing drilling equipment between installations. It is our understanding that the additional split samples will serve to substantiate the effectiveness of the cleaning efforts. Under these conditions, we would not anticipate the need to redo specific RI efforts unless the PRP's wished further confirmation of a result detected in the environmental samples. We would like to request that if this is your understanding of the situation, that the POP be signed with a footnote delineating the exception taken on the cleaning of the drilling equipment.

Mr. Jon Bornholm
April 21, 1989
Page 2

If there are any problems, please contact myself or the PRP's.

Sincerely,

A handwritten signature in black ink, appearing to read "Gordon A. Peterson". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Gordon A. Peterson
Project Manager

dew/L802&JB.GAP



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET
ATLANTA, GEORGIA 30363

APR 13 1989

4WD-SFB

Mr. W. Coleman Miles, Jr.
SCDHEC
2600 Bull Street
Columbia, SC 29201

Re: Response to Your November 1, 1988 Letter that Incorporates Comments
from Michael Muthig on the Medley Farm Superfund Site

Dear Mr. Miles:

The following are the Agency's responses to Mr. Muthig's comments in his
October 25, 1988 memo addressed to you.

1. The addition of the two objectives have been made to the Project Operations Plan (POP).
2. The location and number of monitoring wells proposed in the work plan and POP are deemed adequate to provide sufficient information for the initial evaluation of the hydrology under the site. The work plan as been structured so that if additional wells are considered necessary, they will be installed in Phase II. The number, depths and locations of these additional wells will be based on the information provided by the wells installed in Phase I. The State will have an opportunity to review the data from Phase I.
3. During periods of field work, when the contractor has personnel at the site, short-term water level measurements will be made.
4. A full round of sampling will be conducted in Phase IB. The initial sampling is only for waste characterization and to identify the site specific parameters to be used in subsequent sampling efforts.
5. Slug testing will be conducted as specified in Section 3.6.8 of the August 1988 Work Plan. The need for pump test data will be determined prior to initiating any remedial design.
6. The need for additional samples will be determined after the State and EPA reviews the analytical data generated as part of Phase I work. Table 5.1 reflects a listing of installations not sampling. I believe Table 5.2 lists the sampling activities.
7. As with previous comments, the PRP's consultant has proposed the work in stages. This was done primarily because there is insufficient data to support decisions, one way or another. Following a review of the Phase I data these decisions will be made. One decision that needs to be made at a later date is the necessity for paired bedrock wells.

8. The proposed well clusters in the work plan and POP represent an adequate initial effort to determine the hydraulic conditions at the site. If additional data is necessary to characterize the extent of groundwater contamination, it will be performed in Phase II.
9. Drill cuttings and drill rates will also be examined to help evaluate the true top of bedrock.
10. The PRPs' consultant anticipates that the standard monitor well installation procedure as described in the work plan and POP will suffice. If conditions vary, a gravel pack analysis will be conducted using grain size information as you suggested.

I trust the above responses adequately address any concern SCDHEC may have with regards to the Medley Farm work plan and POP. If you have any questions, please call me at (404) 347-7791.

Sincerely yours,



Jon K Bornholm
Superfund Project Manager

cc: Michael Muthig, SCDHEC
Gordon Peterson, Sirrine
Les Oakes, King & Spalding

COMMUNICATION REPORT

Person Contacted John Bornholm
Company EPA - RPM
Address REGION IV
Atlanta, GA

Project No. G 8026
Date 2-10-1989 Time 14:40 hrs.
Client Medley Farm PRPs
Re Medley Farm Site - RI

Telephone (404) 347-7791
Recorded By Jim Chamness

Telephone Conversation ☒
Office Conversation ☐

- Called to check on status of final EPA review/approval of P.O.P. and to discuss Phase IA TEST PIT excavation schedule.
- John indicated that there were some additional comments on the P.O.P. however he indicated that SEC should proceed with the Phase IA test pit excavation scheduled for 2-15-1989 following procedures outlined in the P.O.P. as submitted on 25 January, 1989.
- John indicated that a representative of Versar (the EPA oversight contractor) would probably be on site 2-15-1989 a.m. to monitor field activities.

Distribution:

Gordon Peterson
Project File.

-----COMMUNICATION REPORT-----

Name John Bornholm Project No. G-8026
Company U.S. EPA - Region IV Date 6-14-88 Time 9:50 a.m.
Address 345 Courtland Street [☒] Telephone Conversation
Atlanta, Georgia [] Office Conversation
Telephone No. (404) 347-7791 Re: Medley Farm Site RI/FS
Recorded By Jim Chamness Soil Gas Survey

Mr. Bornholm, the EPA Project Manager for this site, gave SEC his approval to proceed with the soil gas survey described in the Project Operations Plant submitted 10 October, 1988, for this project. The soil gas samplers will be installed at the site during the period of 17 through 20 October by a representative of PETREX with guidance by SEC. The collectors will be left in the ground for a period of approximately four (4) weeks after which they will be retrieved and analyzed. Approximately three (3) weeks will then be required for analysis and data reporting.

SIRRINE ENVIRONMENTAL CONSULTANTS


Jim Chamness

cc: Mr. John K. Bornholm - EPA
Mr. Les Oakes
Mr. Roger Florio -
Mr. Hank Graulich
Mr. Gordon Peterson - SEC
Mr. Jim Cloonan - SEC
Project File



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

JAN 04 1990

4WD-SFB

Mr. Les Oakes
King & Spalding
2500 Trust Company Tower
Atlanta, GA 30303

Re: Approval of the Analytical Parameters and Phase IB Sampling Locations
for the Medley Farms Superfund Site

Dear Mr. Oakes:

The Agency received the document entitled "Proposed Analytical Parameters and Phase IB Sampling Locations", dated November 3, 1989, on November 7, 1989. Comments generated by the review of this document were sent to you in a correspondence dated November 30, 1989. In this correspondence the Agency highlighted several technical concerns and suggested the most expeditious means of resolving these concerns.

In response to the Agency's November 30, 1989 letter, Mr. James Chamness, who is with Sirrine Environmental Consultants (SEC), the potentially responsible parties' (PRPs') consultant, called me on December 5, 1989. Our discussion centered on these highlighted concerns. Enclosed is a "Communication Record" from Mr. Chamness that accurately reports our conversation. Based on the information provided by Mr. Chamness during this telephone conversation, I approved the identified analytical parameters and Phase IB sampling locations. SEC is to submit a revised Phase IB sampling and analytical plan to the Agency that reflects the changes required by the Agency's November 30, 1989 letter and my December 5, 1989 telephone conversation with Mr. Chamness. I anticipate receiving this revised plan in the near future.

In addition to confirming the approval of the analytical parameters and Phase IB sampling points, this correspondence will prevent any misunderstanding as to when the Agency approved Task 2.3 - EPA Approval of Indicator Parameters specified in Figure 6.1 of the Medley Farm Work Plan. The Agency's approval on Task 2.3 was provided to SEC on December 5, 1989 and therefore, that is the date Agency is using to estimate the submittal date for the draft Remedial Investigation (RI) report. According to the schedule in Figure 6.1 of the Medley Farm Work Plan, the draft RI report should be submitted to the Agency the week of February 19, 1990.

If you have any questions on the above, please call me at (404)347-7791.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "Jon K. Bornholm", followed by a horizontal line.

Jon K. Bornholm
Remedial Project Manager

Enclosure

cc: Knoll Simmons, Versar
Jim Chamness, SEC
Wayne Lee, EPA/ORC
Wes Caughman, SCDHEC

COMMUNICATION REPORT

Person Contacted Jon Bornholm Project No. G-8026
Company EPA-Region IV Date 12/5/89 Time 9:30am
Address Atlanta, Georgia Client Medley Farm Site PRPs
 Re Response to EPA comments
 on Proposed Phase IB
Telephone No. (404) 347-7791 Telephone Conversation X
Recorded By James S. Chamness Office Conversation

- In the comments from EPA dated 30 November, 1989, Mr. Bornholm (EPA Project Manager) indicated that a response by telephone to comments 4, 6 and 7 would be required prior to approval to proceed with the proposed Phase IB sampling and analytical plan. Based on the responses summarized below, Jon gave SEC approval to proceed:

Response to EPA Comment No:

4. Semi-volatile organic compounds were not detected in any ground-water samples analyzed during Phase IA at levels above SQLs. Compounds detected below SQLs consisted primarily of common laboratory artifacts. Therefore, semi-volatile organic analyses will not be performed on ground-water samples collected during Phase IB.

The ground-water samples (2) collected from the background wells (SW-1 and BW-1) will be analyzed for TAL Metals in addition to TCL volatile organic compounds.


6. Soil samples will be collected for Dioxin analysis from soil borings drilled at the locations where test pits TP2 and TP4 were excavated. One sample will be collected for dioxin analysis of the natural soils immediately underlying the fill materials which may have been placed during the EPA emergency response action. Logs of test pits TP2 and TP4 will be used to determine appropriate sampling intervals. These two (2) soil samples will be composited and one (1) composite soil sample will be analyzed for dioxins by CLP Special Analytical Services.

December 6, 1989

Page 2

7. TP2 and TP4 were selected over test pits TP3 and TP9 as sampling locations for the Dioxin analyses for the following reasons: 1) trace levels (below SQLS) of pentachlorophenol, a potential dioxin precursor compound, was detected in samples TP2-1 and TP9-1. Since Aroclor 1254, another potential dioxin precursor was also detected in TP2-1, TP2 was selected as one of the dioxin sampling locations. Several dioxin related semi-volatile organic compounds were detected at low levels in TP4-1, since only one (1) dioxin related compound was detected in TP3-1, TP4 was selected as the second dioxin sampling location.
- Split samples will be collected by the EPA oversight contractor (Versar) from BW-1 and BW-3 (ground water) and RW-3 (surface water). Split samples will also be collected from selected soil boring samples.
 - SEC will prepare a written response to all EPA comments (dated on November 30) on the Phase IB sampling plan.
 - SEC intends to conduct Phase IB test pit excavation December 13-20. Ground-water, surface water and stream sediment samples may also be collected before Christmas. Soil borings will probably not be performed before the first week in January. Sirrine will contact Jon Bornholm to confirm schedules for field activities.

SIRRIANE ENVIRONMENTAL CONSULTANTS, INC.


James S. Chamness

cc: Mr. Jon Bornholm - EPA, Region IV, Atlanta
Ms. Mary Jane Norville - King & Spalding
Mr. Ted Volario - National Starch
Mr. Phil Connor - Ogletree, Deakins, Nash, Smoak and Stewart
Project File

/rmb

MAY 23 1989

44D-SFB

Mr. Les Oakes
King & Spalding
2500 Trust Company Tower
Atlanta, GA 30303

Re: Agency's Approval to Proceed with Monitor Well Installation at the
Medley Farms Superfund Site

Dear Mr. Oakes:

By means of this letter the Agency is directing the Potentially Responsible Parties (PRPs) to have their contractor, Sirrine Environmental Consultants, proceed with the installation of monitor wells at the above referenced Superfund site. It is the Agency's understanding that well permits are forthcoming from the State of South Carolina Department of Health and Environmental Control (SCDHEC) depending on Sirrine's submission of a revised Project Operations Plan (POP) to SCDHEC and EPA. Even if well permits were not forthcoming, Sirrine is still to proceed with the installation of these monitor wells as the remedial investigation field work has been delayed long enough over this issue.

It is the Agency's desire to have the PRPs proceed with the installation of the monitor wells with or without the State's well permits. This is feasible as Superfund is only required to meet the technical requirements of ARARs, which is the category that the State's well permitting process falls into. Sirrine has assured the Agency that the design and construction of the monitor wells at the Medley Farm site satisfies the State's technical requirements for issuing a well permit. This provision, however, only holds true for activities conducted on-site. Therefore, it will be necessary to obtain a permit for the bedrock monitor well to be installed at MW-3 as this spot is located off-site. The time required to install the other wells should provide Sirrine sufficient time to attain a State permit for this bedrock well.

Both the Agency and Sirrine have been in contact with the State in attempts to rectify this situation. Last week, SCDHEC proposed the relocation of two (2) saprolite wells. The Agency concurs with the relocations, as proposed by SCDHEC. These saprolite monitor wells were originally to be located at MW-3 and MW-4. The new well locations are one to the east of the paired wells at MW-2 and the other to the north of MW-2. Both of these new locations will be in close proximity to the boundary of the former disposal area. The location and rationale for relocating these 2 saprolite monitor wells is the only change to be incorporated in the revised POP.

-2-

I have been in contact with Sirrine and have informed them of the issuance of this directive. The driller they have subcontracted is to mobilize and initiate drilling activities the week of May 22, 1989.

If you have any questions, please contact me at 347-7791.

Sincerely yours,

Jon K. Bornholm
Superfund Project Manager

cc: Wayne Lee, ORC
Lynn Martin, ECD/EC
Gordon Peterson, Sirrine



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

348 COURTLAND STREET
ATLANTA, GEORGIA 30363

MAY 16 1989

4WD-SFB

Mr. Les Oakes
King & Spalding
2500 Trust Company Tower
Atlanta, GA 30303

Re: Approval of Medley Farms Project Operations Plan
with Caveat on Cleaning Procedures for Drilling
(Down-hole) Equipment

Dear Mr. Oakes:

I shared Sixrine's April 21, 1989 letter with Region IV Environmental Services Division (ESD). ESD is in agreement with the language in Sixrine's letter. The Medley Farm Work Plan dated August 1988 and Project Operations Plan (POP) dated January 1989 are approved with the understanding that an alternate cleaning procedure will be used to decon the drilling (down-hole) equipment. It is also the Agency's understanding that additional rinsate samples for quality control/quality assurance purposes will be collected during the cleaning process for analysis. If this is your understanding as well, no response is necessary from the Potentially Responsible Parties.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "Jon K. Bornholm", is written over the typed name.

Jon K. Bornholm
Superfund Project Manager

cc: Ken Barry, Versar
Donald Hunter, ESD
Coleman Miles, Jr., SCDHEC
Gordon Peterson, Sixrine



Post Office Box 24000
Greenville, South Carolina 29616
(803) 234-3000

April 21, 1989

Mr. Jon Bornholm
USEPA - Region IV
Superfund Project Manager
345 Courtland Street
Atlanta, GA 30365

Re: Medley Farms Site POP - G8026

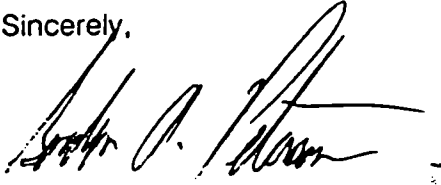
Dear Jon:

After discussing your letter of April 4, 1989 on the POP for the Medley Farms Site with the PRP's it was determined that further clarification was in order before proceeding with the field activities. Concerns were raised as to the interpretation that could be made of your response letter. Both SIRRINE and the PRP's want to ensure that we are clearly understanding EPA's position on the field cleaning procedures. It is our understanding that all elements of the Work Plan and POP have been approved with the exception of the field cleaning procedures for the "downhole" drilling equipment. As a point of clarification, the POP has been amended to utilize the ESD suggested cleaning protocols for all sampling equipment split spoons, hand augers, etc. A limited number of installations are being made at this site. In addition, the nature of the site is such that the staging of facilities for large equipment isopropanol rinses, storage of equipment, storage of chemicals and waste drums is difficult. No buildings or covered facilities are available. With this in mind, the costs of the additional rinsing for drilling equipment would become a significant portion of the overall costs. On numerous other sites under various regulatory programs, SEC has found careful steam cleaning as an acceptable method of preparing drilling equipment between installations. It is our understanding that the additional split samples will serve to substantiate the effectiveness of the cleaning efforts. Under these conditions, we would not anticipate the need to redo specific RI efforts unless the PRP's wished further confirmation of a result detected in the environmental samples. We would like to request that if this is your understanding of the situation, that the POP be signed with a footnote delineating the exception taken on the cleaning of the drilling equipment.

Mr. Jon Bornholm
April 21, 1989
Page 2

If there are any problems, please contact myself or the PRP's.

Sincerely,

A handwritten signature in black ink, appearing to read "Gordon A. Peterson". The signature is fluid and cursive, with a large initial "G" and "P".

Gordon A. Peterson
Project Manager

dew/L8026JB.GAP

CHITMANESS



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET
ATLANTA, GEORGIA 30365

APR 13 1989

4WD-SFB

Mr. W. Coleman Miles, Jr.
SCDHEC
2600 Bull Street
Columbia, SC 29201

Re: Response to Your November 1, 1988 Letter that Incorporates Comments from Michael Muthig on the Medley Farm Superfund Site

Dear Mr. Miles:

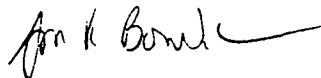
The following are the Agency's responses to Mr. Muthig's comments in his October 25, 1988 memo addressed to you.

1. The addition of the two objectives have been made to the Project Operations Plan (POP).
2. The location and number of monitoring wells proposed in the work plan and POP are deemed adequate to provide sufficient information for the initial evaluation of the hydrology under the site. The work plan as been structured so that if additional wells are considered necessary, they will be installed in Phase II. The number, depths and locations of these additional wells will be based on the information provided by the wells installed in Phase I. The State will have an opportunity to review the data from Phase I.
3. During periods of field work, when the contractor has personnel at the site, short-term water level measurements will be made.
4. A full round of sampling will be conducted in Phase IB. The initial sampling is only for waste characterization and to identify the site specific parameters to be used in subsequent sampling efforts.
5. Slug testing will be conducted as specified in Section 3.6.8 of the August 1988 Work Plan. The need for pump test data will be determined prior to initiating any remedial design.
6. The need for additional samples will be determined after the State and EPA reviews the analytical data generated as part of Phase I work. Table 5.1 reflects a listing of installations not sampling. I believe Table 5.2 lists the sampling activities.
7. As with previous comments, the PRP's consultant has proposed the work in stages. This was done primarily because there is insufficient data to support decisions, one way or another. Following a review of the Phase I data these decisions will be made. One decision that needs to be made at a later date is the necessity for paired bedrock wells.

8. The proposed well clusters in the work plan and POP represent an adequate initial effort to determine the hydraulic conditions at the site. If additional data is necessary to characterize the extent of groundwater contamination, it will be performed in Phase II.
9. Drill cuttings and drill rates will also be examined to help evaluate the true top of bedrock.
10. The PRPs' consultant anticipates that the standard monitor well installation procedure as described in the work plan and POP will suffice. If conditions vary, a gravel pack analysis will be conducted using grain size information as you suggested.

I trust the above responses adequately address any concern SCDHEC may have with regards to the Medley Farm work plan and POP. If you have any questions, please call me at (404) 347-7791.

Sincerely yours,



Jon K. Bornholm
Superfund Project Manager

cc: Michael Muthig, SCDHEC
Gordon Peterson, Sirrine
Les Oakes, King & Spalding

COMMUNICATION REPORT

Person Contacted John Bornholm
Company EPA - RPM
Address REGION IV
Atlanta, GA

Project No. G 8026
Date 2-10-1989 Time 14:40 hrs.
Client Medley Farm PRP
Re Medley Farm Site - RI

Telephone (404) 347-7791

Telephone Conversation ☒

Recorded By Jim Chamness

Office Conversation ☐

- Called to check on status of final EPA review/approval of P.O.P. and to discuss Phase IA TEST PIT excavation schedule.
- John indicated that there were some additional comments on the P.O.P. however he indicated that SEC should proceed with the Phase IA test pit excavation scheduled for 2-15-1989 following procedures outlined in the P.O.P. as submitted on 25 January, 1989.
- John indicated that a representative of Versar (the EPA oversight contractor) would probably be on site 2-15-1989 a.m. to monitor field activities.

Distribution:


Gordon Peterson
Project File.

-----COMMUNICATION REPORT-----

Name John Bornholm Project No. G-8026
Company U.S. EPA - Region IV Date 6-14-88 Time 9:50 a.m.
Address 345 Courtland Street [X] Telephone Conversation
Atlanta, Georgia [] Office Conversation
Telephone No. (404) 347-7791 Re: Medley Farm Site RI/FS
Recorded By Jim Chamness Soil Gas Survey

Mr. Bornholm, the EPA Project Manager for this site, gave SEC his approval to proceed with the soil gas survey described in the Project Operations Plant submitted 10 October, 1988, for this project. The soil gas samplers will be installed at the site during the period of 17 through 20 October by a representative of PETREX with guidance by SEC. The collectors will be left in the ground for a period of approximately four (4) weeks after which they will be retrieved and analyzed. Approximately three (3) weeks will then be required for analysis and data reporting.

SIRRINE ENVIRONMENTAL CONSULTANTS


Jim Chamness

cc: Mr. John K. Bornholm - EPA
Mr. Les Oakes
Mr. Roger Florio -
Mr. Hank Graulich
Mr. Gordon Peterson - SEC
Mr. Jim Cloonan - SEC
Project File

APPENDIX B

PETREX® SOIL GAS SURVEY FINAL REPORT

FINAL REPORT ON THE FINDINGS OF
THE PETREX SOIL GAS SURVEY CONDUCTED FOR
SIRRIE ENVIRONMENTAL CONSULTANTS AT THE
MEDLEY FARM SITE LOCATED IN
GAFFNEY, SOUTH CAROLINA

PREPARED BY PETREX
A DIVISION OF NORTHEAST RESEARCH INSTITUTE, INC.

MARCH 8, 1989

INTRODUCTION

The Medley Farm site is located approximately six miles south of Gaffney, South Carolina and occupies about seven acres of the sixty-two acre farm parcel. The closed drum and waste disposal site is located on a flat portion of a hill with downward sloping land to the south and east. Disposal of solvent drums and other waste products reportedly began in 1973 and continued until June, 1976. Remediation of the site began in May, 1983, and was completed in June of the same year. Various investigative methods were also undertaken at later dates to determine the extent of contamination. One monitoring well was installed, sampled, and found to contain various concentrations of volatile organic compounds (VOCs). This report describes the results of the Petrex soil gas survey conducted in October, 1988 to help identify site contamination.

SURVEY OBJECTIVES

The objective of the Petrex survey was to delineate potential areas of residual soil contamination which may be present. The results of this survey will be used to help select optimum locations for direct soil sampling. Personnel of Sirrine Environmental Consultants reported that Dichloroethylene (DCE), Trichloroethylene (TCE), and Carbon Tetrachloride were the VOCs detected at the highest concentrations in the monitoring well located on the Medley Farm site.

SURVEY DESIGN

A total of 123 Petrex soil gas collectors was installed in the Medley Farm site area. A high density grid pattern of samples spaced fifty feet apart was used to concentrate on the most likely source areas based on historical data, specifically the former drum storage and pond locations. A 100 foot grid spacing was utilized outside of these areas for additional screening. The survey grid was designed by Sirrine Environmental Consultants.

COLLECTOR INSTALLATION AND RETRIEVAL

During sample collector installation, the site geologist noted soil with a bluish tint between sample location 79 and 80. Near the same location were several small areas where a plastic looking substance was noted. Also noted in several areas of the site were metal drum lids, possibly remnants from previously excavated waste barrels.

RESULTS

Several VOC's were identified in the soil gas collected at the Medley Farm site. Six different compound maps were initially produced, which represent the major compounds or classes of compounds which were identified. Per Sirrine's instructions, the following four maps of individual or groups of contaminants were finalized:

Plate 1: Tetrachloroethylene

Plate 2: Trichloroethylene

Plate 3: Aromatics C₆-C₁₅

Plate 4: Alkanes C₂-C₁₀

In addition, a sample location map is also provided as Plate 5.

The maps which were not finalized include toluene, and carbon tetrachloride and trichloroethane. As toluene is a C₇ aromatic hydrocarbon, its distribution is displayed in the C₆-C₁₅ aromatic map. Due to the mass spectral properties of carbon tetrachloride and trichloroethane, which make them difficult to differentiate, a combined map of these compounds was produced. However, the distribution of the soil gas signatures of these compounds was very similar to that of the other chlorinated solvents, and therefore it was determined that no significant additional information would be provided by this map.

Additional information regarding the Petrex soil gas method is included in Attachment 1.

DISCUSSION

The values on the maps represent the relative amounts detected for each of the identified compounds. Values for the same compound can be compared to distinguish potentially higher and lower contaminant levels. This information is useful for helping to identify source areas, migration pathways, migration directions, and the areal extent of contamination. Values for different compounds can not be directly compared.

The ability to detect various VOCs in soil gas is dependent upon various physiochemical properties of the materials involved. The physical characteristics of a particular compound (i.e., vapor pressure, solubility) will determine how it partitions into the vapor phase from the soil. Additionally, the chemical and physical nature of the local lithologies and soils will influence the behavior and composition of soil gases. Therefore, the detection of different contaminants through soil gas will vary. For example, tetrachloroethylene is more easily detected in soil gas, than is carbon tetrachloride under the same conditions.

The interpretation of soil gas data should be performed with some caution. The significance of one or two sample anomalies is often difficult to determine and groupings or patterns from multiple point anomalies are more informative. It has been our experience that one or two sample anomalies may represent highly localized point source contamination, or simply a small portion of a more extensive area of contamination. Multiple point anomalies may indicate probable source areas, broad contamination regions, or migration pathways, and are much easier to interpret.

The identification of the alkane and aromatic compounds was complicated by the presence of terpenes at about 36 collector locations. Terpenes are a class of organic compounds typically produced by local vegetation (i.e., pine trees). The mass spectral peaks for terpenes occur at mass assignments similar to the identified hydrocarbons. Due to this masking effect, not all hydrocarbon compounds could be positively identified at all collector locations. Sample locations with terpene interference have asterisks at their respective locations.

CONCLUSION

The maps produced show contourable patterns of soil gas VOCs directly in and around the former drum storage and pond areas. The individual maps show comparable anomalies, which may represent source areas of a quantity of residual solvents.

PETREX SOIL GAS PROTOCOL

ATTACHMENT 1

PETREX SOIL GAS PROTOCOL

INTRODUCTION

The Petrex Static Collection Technique provides a means by which trace quantities of subsurface derived organic compounds can be detected and collected at the earth's surface. It is integrative, thereby eliminating the short-term variations associated with other gas/vapor detection methods. The Petrex Technique directly collects and records a broad range of organic compounds emanating from subsurface sources.

SOIL GAS COLLECTOR PREPARATION

Soil gas collectors are prepared as follows:

1. Adsorption wires (after construction) are cleaned by heating to 358°C in a high vacuum system.
2. Wires are packed under an inert atmosphere in airtight tubes.
3. One collector out of every thirty is checked for cleanliness by mass spectrometry. Based on the results, the group of thirty collectors is approved for release into the field.

SAMPLER SHIPMENT AND FIELD HANDLING

Five percent transportation blanks are included with each shipment. Transportation blank samplers are stored unopened until analysis with the field samplers.

SOIL GAS COLLECTOR INSTALLATION

The collector consists of a ferromagnetic wire coated with an activated adsorbent. Each sample is typically placed in a shallow hole, 20-30 cm deep, within a protective container. The hole is backfilled and the location is marked. The collector is left in the ground for as long as 45 days, then retrieved and sealed in its container for transportation back to the laboratory for analysis.

MASS SPECTROMETER TUNING

An Extranuclear Quadrupole Mass Spectrometer equipped with a Curie-point pyrolysis/thermal desorption inlet is used for collector analysis. Mass assignment and resolution are manually adjusted using a perfluorotributylamine (PFTBA) standard. A linear correction, based on the known spectrum of PFTBA, is calculated. This correction is applied to a second PFTBA spectrum. If correct mass (M/Z) values are obtained, the operator proceeds to the next tuning step. If not, the procedure is repeated until correct masses are obtained.

Peak intensity ratios are set from the major peaks in the PFTBA spectrum using the following values:

<u>Mass</u>		<u>Spectrum</u>
<u>(M/Z)</u>		<u>Intensities</u>
69	=	100%
131	=	25% \pm 5%
219	=	35% \pm 5%

During tuning, the ion signal for mass (M/Z) 69 of PFTBA is measured at a preset sample pressure and detector voltage and compared to previous values at the same setting.

Electron energy is set to 70 electron volts and emission is set at 12 milliseconds. All other operating parameters, such as scans, scan range, and mass offset, are established in the computer program. These values may only be changed by the laboratory manager.

Tuning is performed at the beginning of a run so that an individual survey is analyzed at the same set of instrument conditions. The samples are analyzed in random order.

LABORATORY ANALYSIS

Machine background analyses are performed periodically (approximately every 20 samples) to assure that there is no carryover between successive samples. If there are peaks which are not related to atmospheric gases, the supervisor is notified and the mass spectrometer is shut down and cleaned as necessary.

A written sample number record is kept during the analysis to prevent accidental sample number duplication. The mass spectrometer control program contains appropriate "flag statements" that prompt the operator with a warning if an input sample number has already been analyzed. The operator then checks the current number, along with the disk storage location of the previously entered number to identify the true sample number.

COMPOUND IDENTIFICATION

Compound identification is based on molecular weight, compound fragmentation, and isotope distribution, as applicable. Each compound exhibits a unique mass spectral signature. NERI/Petrex maintains a large library of spectra for individual compounds, accessible by computer. In addition, the company maintains a large library of commonly used chemical mixtures, e.g., gasolines, diesels, industrial oils and solvents, coatings, and plastics. These are used to assist in both compound and mixture identifications.

Indicator peaks, indicative of the compound and away from interference by other compounds, are selected for data presentation and mapping.

RELATIVE FLUX DETERMINATION

The process of determining ion counts (fluxes) of indicator peaks for the specified compounds is totally computerized. Sample locations on a base map are digitized as X-Y coordinates and flux data for the given compounds are plotted at respective locations. All flux data are then extracted from the original data file for subsequent processing.

Mapping of the relative flux data occurs after contour intervals for each compound or component class are determined. In order to establish the contour intervals, factors such as flux distribution, physiochemical considerations, and component-source material relationship (if known) are taken into account for each compound or class, in each area, on an individual basis. Each map is then contoured by hand, or in special cases, computer contoured. The resultant contour zones for each compound or component in each area are color-coded on a relative basis.

It should be noted that the reported ion counts are representative of a flux which is proportional to the component's emanation rate at a particular sample location and is not a measure of concentration. Flux values for one compound cannot be quantitatively compared to flux values for different compounds. At this time, there has been no absolute equation established from which subsurface compound concentrations can be calculated from surficial flux levels.

PETREX FIELD INSTRUCTIONS

***** WARNING *****

IF THESE INSTRUCTIONS ARE NOT READ COMPLETELY AND FOLLOWED THOROUGHLY
THE SURVEY RESULTS MAY BE SERIOUSLY COMPROMISED

PLEASE CALL PETREX FIELD PERSONNEL IF YOU HAVE ANY QUESTIONS:

(303) 238-0090

or

(203) 677-9666

***** CAUTION *****

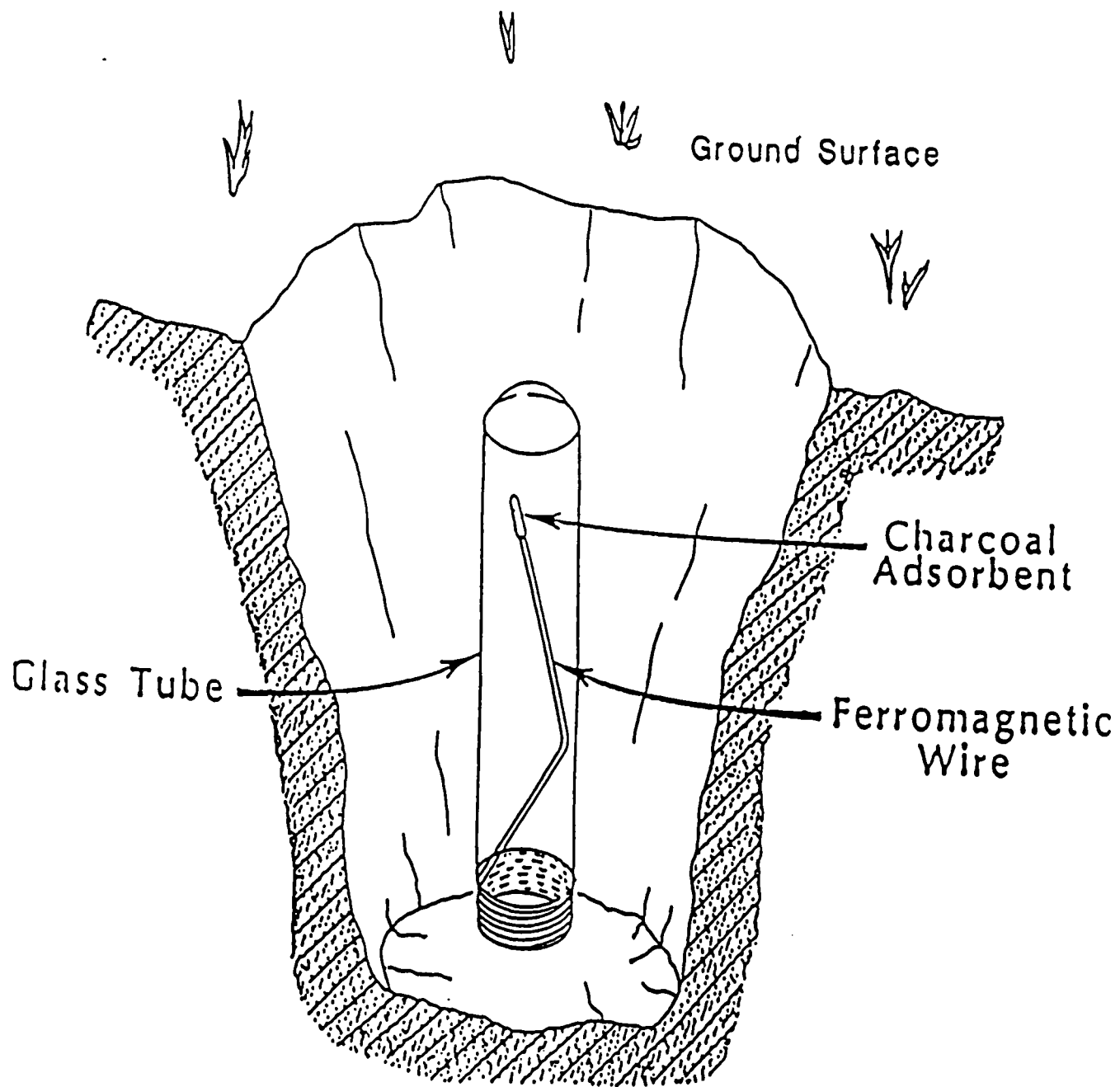
The most critical aspect of collector placement is to prevent exposing the collector to contaminants other than those in the soil gas. Smoking around the collectors, even when sealed, may contaminate them. Hands MUST be kept free of organics, including insect repellent, sunblock, gasoline, motor oil, cosmetics, smoke residues, etc. The lip and inside of the tubes, caps, and cap liner must not contact any contaminants.

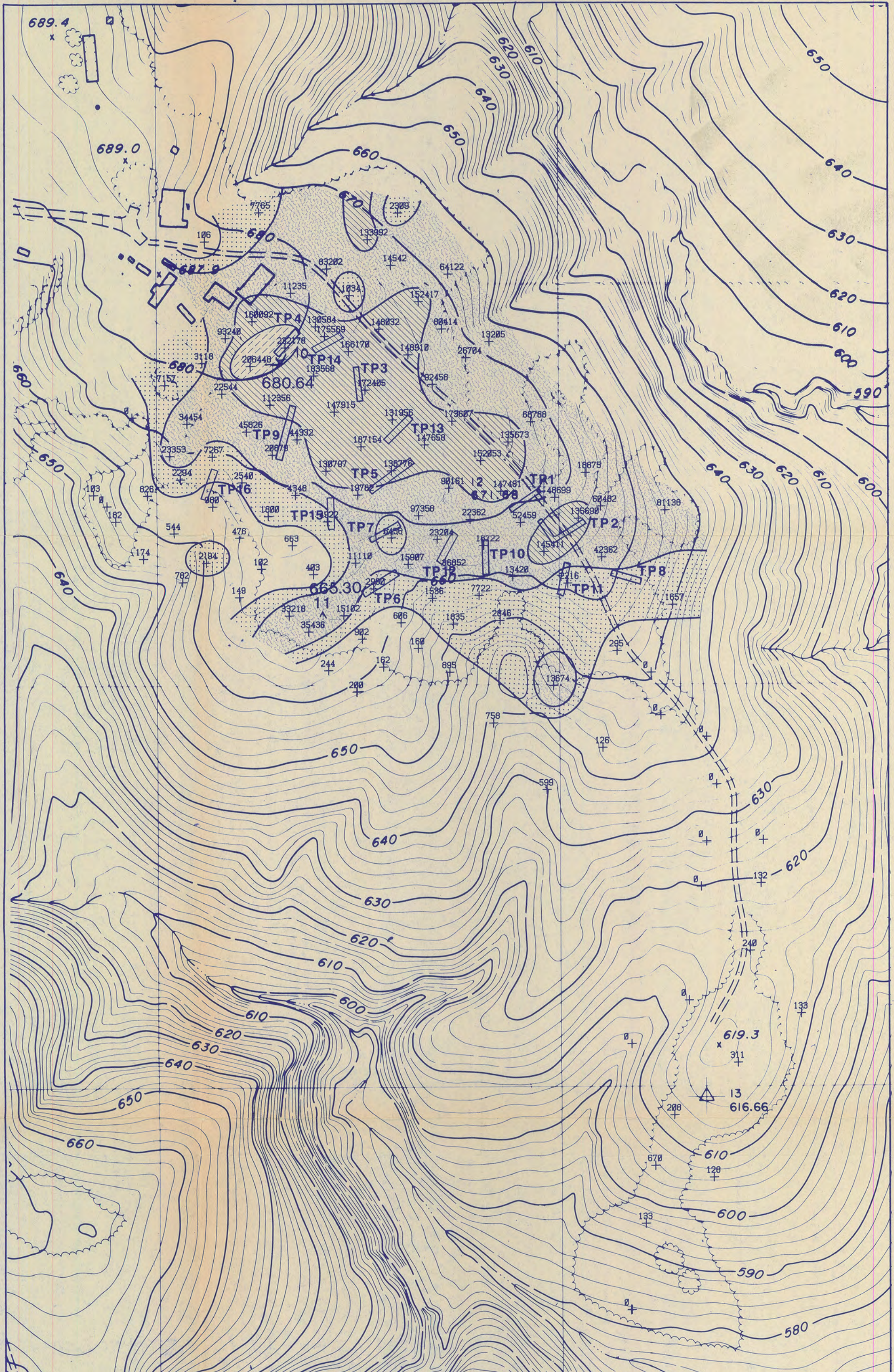
Storage - Tubes must be stored in a clean area away from contaminants. DO NOT store near gasoline cans, oily rags, etc. DO NOT smoke in the same room collectors are stored in. Keep collectors away from exhaust fumes.

Rainfall - If there is a high influx of water (rain, snow melt, etc.) in the area it may disturb the soil gas equilibrium and reduce soil gas collection. Please contact Petrex if high water influx is anticipated or has already occurred.







FIELD INSTRUCTIONS

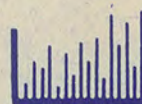
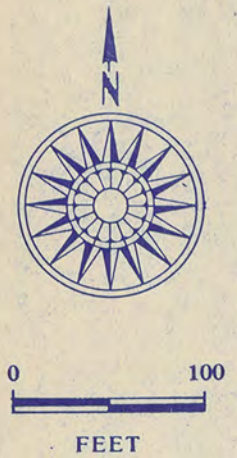
- 1) Dig sample location 10-12 inches deep and approximately 2-4 inches in diameter. Do not contaminate the soil.
- 2) Remove the cap. If the black liner has stuck to tube lip, remove it and immediately place sampler (vertically with open end down) into sample location hole. The sampler tube must be at least two inches below ground surface. Immediately cover the sampler with soil.
- 3) If the black liner has come out of the cap, replace it and return the cap to one of the clean plastic bags provided.
- 4) Mark the sample location with flagging or other material. Note the sample location on a base map and enter information in a field notebook.
- 5) Retrieving samples - (should be done at the recommended time intervals).
 - (A) Remove the soil until tube is exposed.
 - (B) Take a cap from sealed plastic bag. Check for black liner inside cap. If liner has fallen out, replace it.
 - (C) Remove tube from the hole. If wire falls out of tube or if tube is broken, use tweezers to handle wire.
 - (D) Wipe off the tube and threads thoroughly with a clean, dry cloth. If the tube threads and lip are not properly cleaned, the cap will not seal and the sample will become contaminated.
 - (E) Seal tube with cap making sure the black liner is seated to tube lip. If cap does not thread easily, use a different cap. Cap must be sealed tightly against liner.
 - (F) Place sticker on cap top and number. Number sequentially starting with 1. Use only numbers to identify samples. For two wire samplers, use two consecutive numbers. Please underline all numbers for easy identification. Do not duplicate cap numbers.
 - (G) Record number or numbers of sampler corresponding to location on base map and field notebook.
 - (H) Do not place tape, sticker, or glue on glass tube. Stickers provided will adhere if placed on dry cap.
- 6) When packaging exposed tubes, please do not use Styrofoam or popcorn packing as this can potentially introduce a contaminant. Enclose tubes in two plastic bags as provided and wrap each package tightly with bubble wrap.





Legend:

- Ion Counts:
-  ≥ 200,000
 -  100,000-199,999
 -  10,000-99,999
 -  1,000-9,999
 -  ≤ 999
 -  Location of Test Pits Excavated During the Remedial Investigation



PETREX

A DIVISION OF NORTHEAST RESEARCH INSTITUTE

605 PARFET STREET
SUITE 100
LAKEWOOD, COLORADO 80215
(303) 238-0090
B551

SIRRIE ENVIRONMENTAL CONSULTANTS

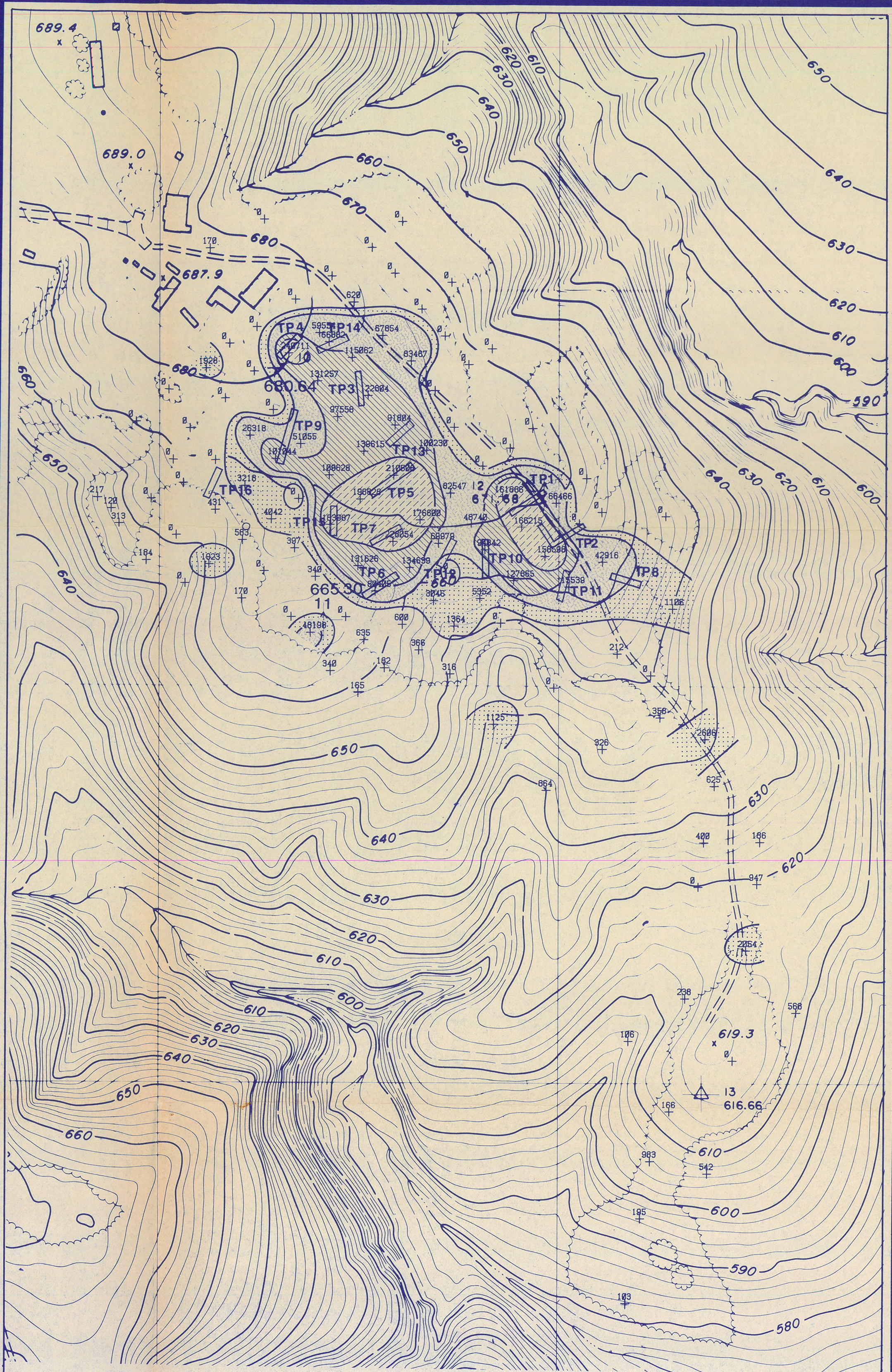
MEDLEY FARM SITE
GAFFNEY, SOUTH CAROLINA

Relative Flux
Tetrachloroethylene

January 16, 1989

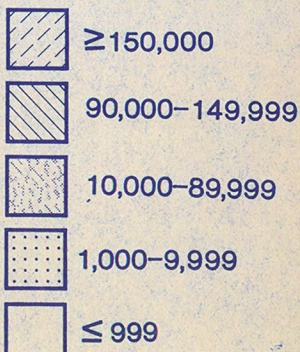
Plate: 1

Scale: 1in.= 100ft.

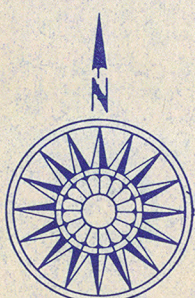


Legend:

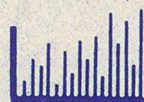
Ion Counts:



Location of Test Pits
Excavated During the
Remedial Investigation



0 100
FEET



PETREX

A DIVISION OF NORTHEAST RESEARCH INSTITUTE

605 PARFET STREET
SUITE 100
LAKEWOOD, COLORADO 80215
(303) 238-0090
B551

SIRRIE ENVIRONMENTAL CONSULTANTS

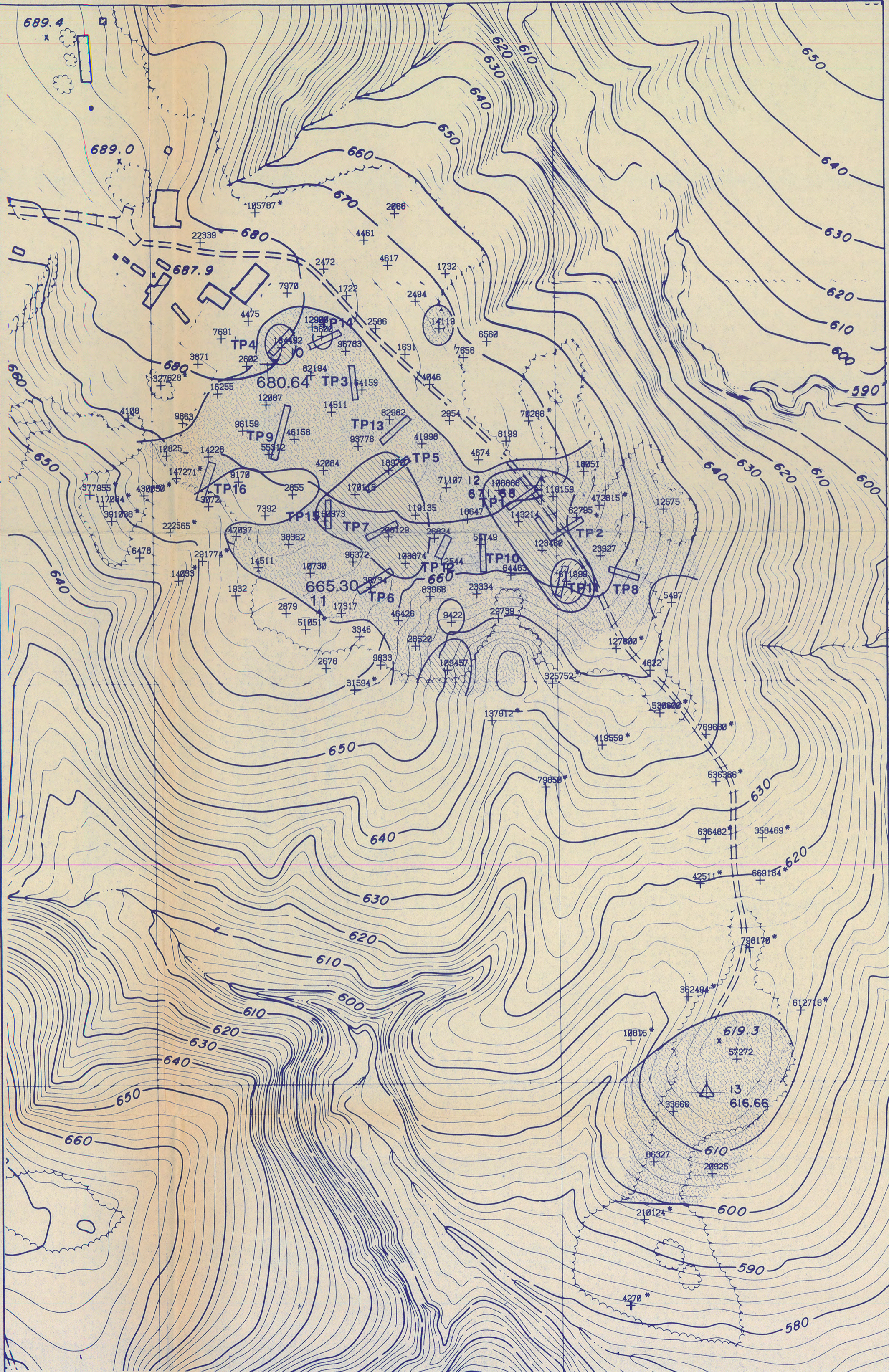
MEDLEY FARM SITE
GAFFNEY, SOUTH CAROLINA

**Relative Flux
Trichloroethylene**

January 16, 1989





Plate: 2

Scale: 1in. = 100ft.




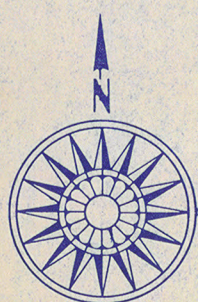
Legend:

Ion Counts:

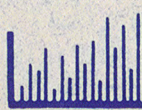
-  ≥ 500,000
-  100,000-499,999
-  10,000-99,999
-  ≤ 9,999

* Positive Identification Not Possible Due To Vegetative Interference (Terpenes)

 Location of Test Pits Excavated During the Remedial Investigation



0 100
FEET



PETREX

A DIVISION OF NORTHEAST RESEARCH INSTITUTE

605 PARFET STREET
SUITE 100
LAKEWOOD, COLORADO 80215
(303) 238-0090
B551

SIRRIE ENVIRONMENTAL CONSULTANTS

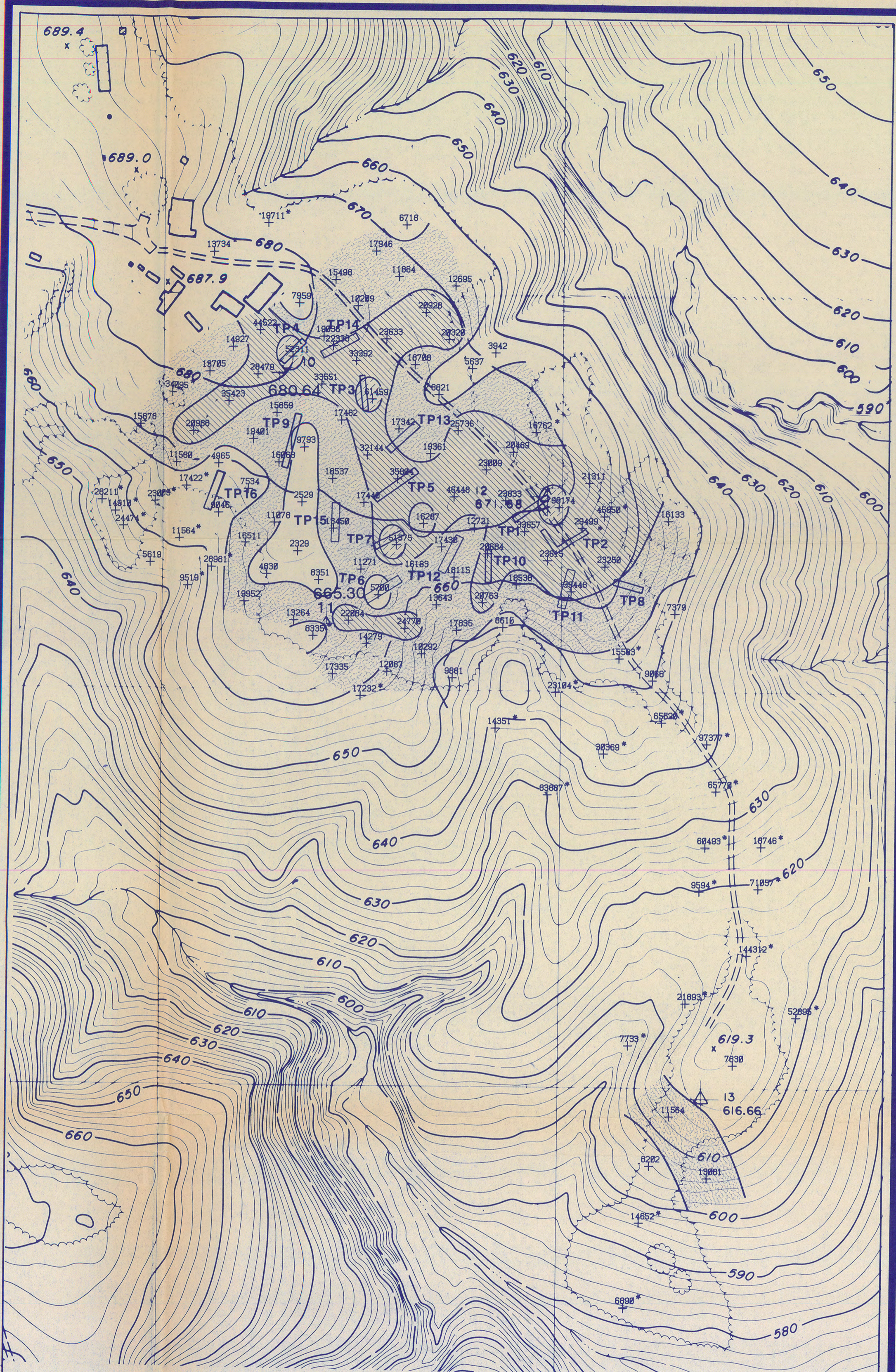
MEDLEY FARM SITE
GAFFNEY, SOUTH CAROLINA

Relative Flux
Aromatics C₆-C₁₅

January 16, 1989





Plate: 3

Scale: 1in.= 100ft.



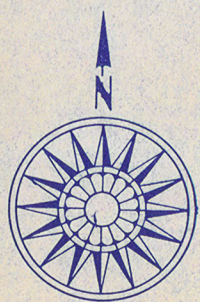
Legend:

Ion Counts:

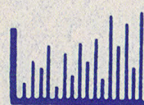
-  ≥ 50,000
-  20,000-49,999
-  10,000-19,999
-  ≤ 9,999

* Positive Identification Not Possible Due To Vegetative Interference (Terpenes)

 Location of Test Pits Excavated During the Remedial Investigation



0 100
FEET



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605 PARFET STREET
SUITE 100
LAKEWOOD, COLORADO 80215
(303) 238-0090
B551

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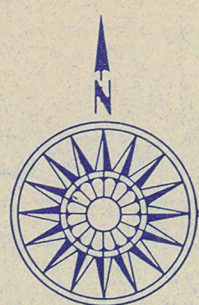
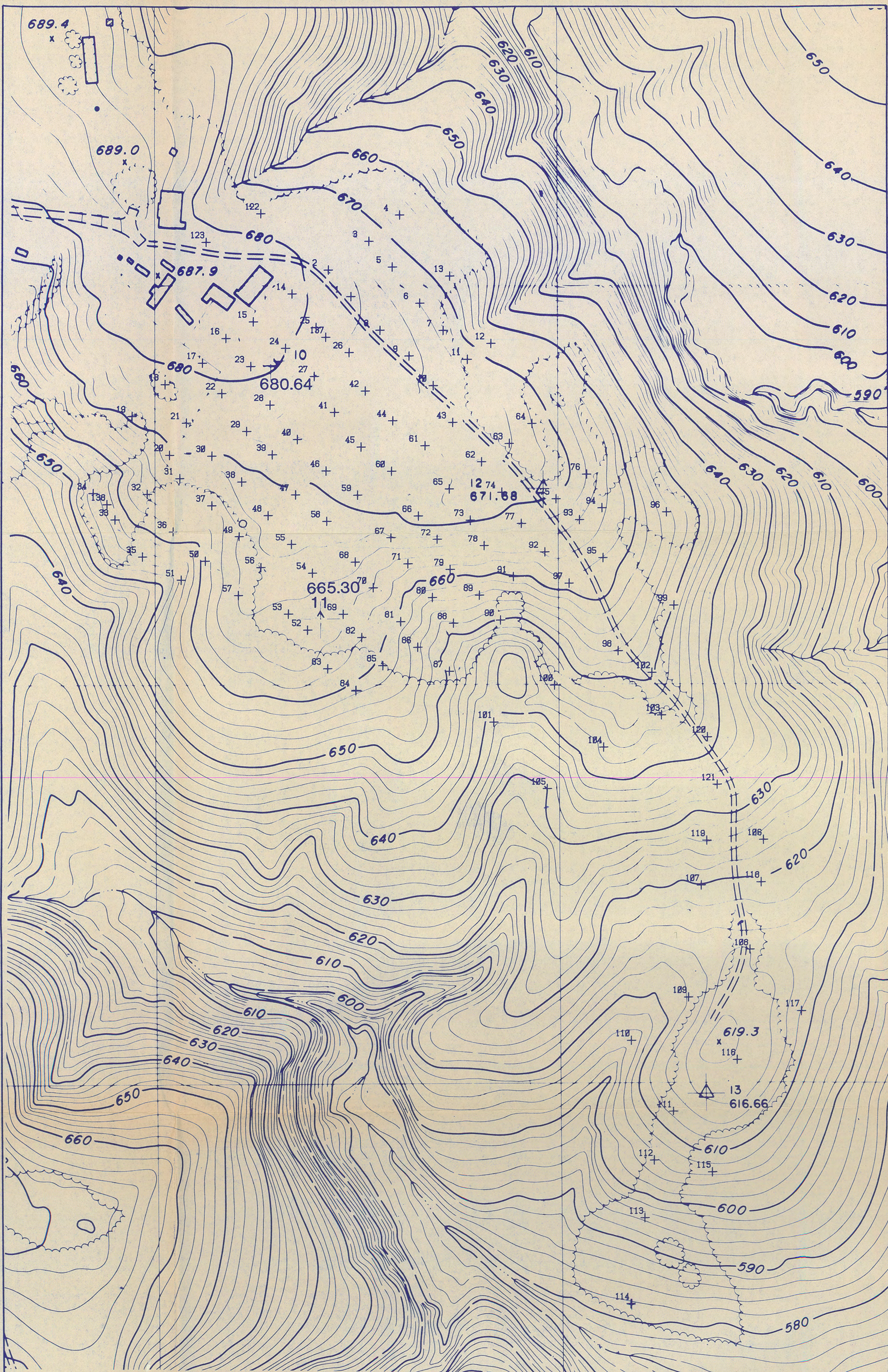
MEDLEY FARM SITE
GAFFNEY, SOUTH CAROLINA

Relative Flux
Alkanes C₂-C₁₀

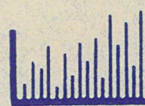
January 16, 1989

Plate: 4

Scale: 1in. = 100ft.



0 100
FEET



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MEDLEY FARM SITE
GAFFNEY, SOUTH CAROLINA

Sample Locations

January 16, 1989

Plate: 5

Scale: 1in.= 100ft.

APPENDIX C
TEST PIT REPORTS



SIRRINE
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TEST PIT REPORT

TEST PIT NO. TP1

PROJECT: MEDLEY FARMS SITE REMEDIAL INVESTIGATION
CLIENT: MEDLEY FARM STEERING COMMITTEE
CONTRACTOR: FENN-VAC
EQUIPMENT USED: CASE 480 E RUBBER TIRE BACK-HOE

JOB NO: G-8026
LOCATION: SEE PLAN
ELEVATION: 670 FT.
DATE START: 22 FEB. 1989
DATE FINISH: 22 FEB. 1989
LOGGED BY: C. RUDINGER

DEPTH (FT)	SAMPLE NO./ DEPTH RANGE	STRATA CHANGE (FT)	FIELD CLASSIFICATION	REMARKS
1		0.0	<u>Silt (ML)</u>	<ul style="list-style-type: none"> • Monitored with OVA during excavation. • No organic vapors were detected in breathing zone while excavating. • Organic vapors were detected in breathing zone while excavating. • Water was seeping through soil fractures located just below topsoil - clay interface in western end of pit. • Trench excavated to 1.5 feet, because no fill detected, only natural clay below topsoil. No discoloration noted except in topsoil
		0.5	Brown, mostly silt, little fine sand, few fine gravel. Roots leaves, branches mixed in with soil. Abundant small mica flakes.	
		0.5	-TOPSOIL-	
2		1.5	<u>Silty Clay (CL)</u>	
			Reddish-orange, mostly silty clay, trace fine sand, trace fine gravel. Vertical fractures visible below soil - saprolite interface.	
			-SAPROLITE-	
2			Bottom Of Exploration 10.0 ft.	
3				
4				
5				
6				
7				
				ASTM COMPONENT %
				MOSTLY 50 - 100 % SOME 30 - 45 % LITTLE 15 - 25 % FEW 5 - 10 % TRACE < 5 %

GROUND WATER		
DATE	TIME *	DEPTH FT.
2/22/89	1350	1.5
NOT ENCOUNTERED		* HRS. AFTER COMPLETION

PIT DIMENSIONS (FT)		
<u>52</u> (L)	x <u>2.5</u> (W)	x <u>1.5</u> (D) = <u>195</u> CU. FT.
BOULDERS		
12 INCH TO 18 INCH DIAM:	NO. <u> </u>	= VOL. <u> </u> CU. FT.
OVER 18 INCH DIAM:	NO. <u> </u>	= VOL. <u> </u> CU. FT.
TEST PIT NO. <u>TP1</u>		

SIRRINE

ENVIRONMENTAL
CONSULTANTS

TEST PIT REPORT

TEST PIT NO. TP2

PROJECT: MEDLEY FARMS SITE REMEDIAL INVESTIGATION
CLIENT: MEDLEY FARM STEERING COMMITTEE
CONTRACTOR: FENN - VAC
EQUIPMENT USED: CASE 480 E RUBBER TIRE BACK-HOE

JOB NO: G-8026
LOCATION: SEE PLAN
ELEVATION: 665 FT.
DATE START: 22 FEB. 1989
DATE FINISH: 22 FEB. 1989
LOGGED BY: C. BUDINGER

DEPTH (FT)	SAMPLE NO./ DEPTH RANGE	STRATA CHANGE (FT)	FIELD CLASSIFICATION	REMARKS
1		0.0	Sand With Silt (SM)	<ul style="list-style-type: none"> Monitored with OVA during excavation. No OVA readings in northerly - trending section of trench; low readings in easterly trending section. Weathered bedrock extended from 2 to 3 feet along side of pit. Residual soil was present elsewhere from 0.5 to 3.0 feet, except where bedrock protruded into it. Composite sample collected from easterly - trending section of test pit in fill material.
		0.5	Purplish - red, reddish - purple to yellowish brown sand, some silt, few fine to coarse gravel, few clay. Fines and granular fraction of soil saturated with dye - difficult to assess fines contents due to this. Detritus occurring in fill.	
		0.5	- FILL -	
2			Silty Clay (CL)	
		2.0	Reddish - orange to reddish - brown, mostly silt, clay, trace fine sand, trace fine gravel. Little small mica flakes.	
3			- RESIDUAL SOIL -	
		3.0	Very soft, moderately severely weathered, pale yellow, fine grained mica schist; rough, tight, steeply dipping joints, very thinly bedded.	
4			- SAPROLITE -	
			Bottom of exploration at 3.0 feet.	
5				
6				
7				

GROUND WATER			PIT DIMENSIONS (FT)	
DATE	TIME *	DEPTH FT.	<u>34</u>	<u>3</u> x <u>3</u> = <u>306</u> CU. FT.
<u>2/22/89</u>	<u>0.25</u>	<u>-</u>	(L)	(W) (D)
NOT ENCOUNTERED	NE	* HRS. AFTER COMPLETION	TEST PIT NO. <u>TP2</u>	

BOULDERS	
12 INCH TO 18 INCH DIAM: NO. <u>0</u> = VOL. <u>0</u> CU. FT.	
OVER 18 INCH DIAM: NO. <u>0</u> = VOL. <u>0</u> CU. FT.	

SIRRINE

ENVIRONMENTAL
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TEST PIT REPORT

TEST PIT NO. TP3

PROJECT: MEDLEY FARMS SITE REMEDIAL INVESTIGATION
CLIENT: MEDLEY FARM STEERING COMMITTEE
CONTRACTOR: FENN - VAC
EQUIPMENT USED: CASE 480 E RUBBER TIRE BACK-HOE

JOB NO: G-8026
LOCATION: SEE PLAN
ELEVATION: 676 FT.
DATE START: 20 FEB. 1989
DATE FINISH: 20 FEB. 1989
LOGGED BY: C. BUDINGER

DEPTH (FT)	SAMPLE NO./ DEPTH RANGE	STRATA CHANGE (FT)	FIELD CLASSIFICATION	REMARKS
1	TP3	0.0	<u>Silty Clay (CL)</u> Brown to dark brown and greenish - gray mottled, mostly silty clay, little sand. Pockets of purple silty sand and bright yellow sand in a few places. Layers of matted detritus (grass, leaves, twigs) interbedded with fill material occasional quartz gravel (coarse). Plastic sheets lined bottom of fill material at northern area of trench. Gummy material was intermixed with plastic sheeting. - FILL -	<ul style="list-style-type: none"> • Monitored with OVA during excavation. • Organic vapor levels generally fluctuated between 20 to 30 ppm in breathing area in trench. • Peak OVA readings while sampling reached 700 to 800 ppm on OVA. • Composite sample collected from dressed areas of pit walls for TCL/TAL analyses.
2		2.2		
3		3.3	<u>Silty Clay (CL)</u> Reddish - brown, mottled grayish yellow, mostly silty clay, little fine to medium sand, few fine gravel; very stiff clay. - RESIDUAL SOIL -	
4			Bottom of exploration at 3.3 feet.	
5				
6				
7				
			ASTM COMPONENT % MOSTLY 50 - 100 % SOME 30 - 45 % LITTLE 15 - 25 % FEW 5 - 10 % TRACE < 5 %	
GROUND WATER			PIT DIMENSIONS (FT)	
DATE	TIME *	DEPTH FT.	$\frac{34}{(L)} \times \frac{7}{(W)} \times \frac{3.5}{(D)} = \frac{833}{\text{CU. FT.}}$	
2/20/89	0.25	-		
NOT ENCOUNTERED	NE	* HRS. AFTER COMPLETION	BOULDERS 12 INCH TO 18 INCH DIAM: NO. <u>0</u> = VOL. <u>0</u> CU. FT. OVER 18 INCH DIAM: NO. <u>0</u> = VOL. <u>0</u> CU. FT.	
			TEST PIT NO. <u>TP3</u>	

SIRRINE

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TEST PIT REPORT

TEST PIT NO. TP4

PROJECT: MEDLEY FARMS SITE REMEDIAL INVESTIGATION
CLIENT: MEDLEY FARM STEERING COMMITTEE
CONTRACTOR: FENN - VAC
EQUIPMENT USED: CASE 480 E RUBBER TIRE BACK-HOE

JOB NO: G-8026
LOCATION: SEE PLAN
ELEVATION: 680 FT.
DATE START: 16 FEB. 1989
DATE FINISH: 16 FEB. 1989
LOGGED BY: J. CHAMNESS

DEPTH (FT)	SAMPLE NO./ DEPTH RANGE	STRATA CHANGE (FT)	FIELD CLASSIFICATION	REMARKS
1	TP4-1	1.0	Silty Clay / Clayey Silt (CL/ML) Mottled red - brown and gray with occasional yellow - white, purple and black patches, mostly intermixed silty clay and silt, some fine sand, few to little organic debris, trace gravel; contaminated soils concentrated in lower 1.5 feet of this layer; occasional pockets of gummy glue like materials; 4 or 5 drum lids encountered; one complete 55 gallon drum encountered near north end of pit - drum fell apart completely when encountered.	<ul style="list-style-type: none"> Monitored with OVA during excavation. Organic vapor levels when pit was initially opened generally fluctuated between 30 and 40 ppm in the pit and immediately downwind. Peaks off pit walls were as high as 100 ppm. Composite sample collected from dressed areas of pit walls for TCL/TAL analyses.
2		2.5	- FILL -	
3			Silty Clay (CL) Red - brown, slightly mottled, mostly silty clay, few sand; hard.	
4			- RESIDUAL SOIL -	
5			Bottom of exploration at 5.0 feet.	
6				
7				

ASTM COMPONENT %

MOSTLY	50 - 100 %
SOME	30 - 45 %
LITTLE	15 - 25 %
FEW	5 - 10 %
TRACE	< 5 %

GROUND WATER		
DATE	TIME *	DEPTH FT.
2/16/89	0.25	-
NOT ENCOUNTERED	NE	* HRS. AFTER COMPLETION

PIT DIMENSIONS (FT)

39 x 5 x 5 = 975 CU. FT.
(L) (W) (D)

BOULDERS

12 INCH TO 18 INCH DIAM: NO. 0 = VOL. 0 CU. FT.
OVER 18 INCH DIAM: NO. 0 = VOL. 0 CU. FT.

TEST PIT NO. TP4

SIRRINE

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TEST PIT REPORT

TEST PIT NO. TP5

PROJECT: MEDLEY FARMS SITE REMEDIAL INVESTIGATION
CLIENT: MEDLEY FARM STEERING COMMITTEE
CONTRACTOR: FENN - VAC
EQUIPMENT USED: CASE 480 E RUBBER TIRE BACK-HOE

JOB NO: G-8026
LOCATION: SEE PLAN
ELEVATION: 671 FT.
DATE START: 23 FEB. 1989
DATE FINISH: 23 FEB. 1989
LOGGED BY: C. BUDINGER

DEPTH (FT)	SAMPLE NO/ DEPTH RANGE	STRATA CHANGE (FT)	FIELD CLASSIFICATION	REMARKS
1		0.0	<u>Silt With Sand (ML)</u> Lensoidal shapes of reddish - orange, tannish - yellow and brown, mostly silt, few fine sand, trace gravel. Overlapping and interbedded matted layers (0.1 to 0.2 inches) of matted leaves and grasses. On edges underlying silty fill is well, rounded fine to coarse gravel (GW). On east end is black, well - rounded fine gravel (GP) - looks like flyash or road - grade asphalt. Plastic bags and other debris noted. - FILL -	<ul style="list-style-type: none">• Monitored with OVA during excavation.• Voids from old decayed 55 gal drums observed.• No organic vapors detected in breathing zone.• Readings from trench walls ranged to 15 ppm.
2		3.5		
3		3.5	<u>Silty Clay (CL)</u> Dense, reddish - orange, silty clay, trace fine sand. Occasional large gravel to small cobble (quartz).	
4		4.5		
5			Bottom of exploration at 4.5 feet.	
6				
7				ASTM COMPONENT % MOSTLY 50 - 100 % SOME 30 - 45 % LITTLE 15 - 25 % FEW 5 - 10 % TRACE < 5 %

GROUND WATER		
DATE	TIME *	DEPTH FT.
2/23/89	0.5	-
NOT ENCOUNTERED	NE	* HRS. AFTER COMPLETION

PIT DIMENSIONS (FT)		
<u>63</u> (L)	x	<u>4.0</u> (W)
	x	<u>4.5</u> (D)
	=	<u>1134</u> CU. FT.
BOULDERS		
12 INCH TO 18 INCH DIAM:	NO. <u>0</u>	= VOL. <u>0</u> CU. FT.
OVER 18 INCH DIAM:	NO. <u>0</u>	= VOL. <u>0</u> CU. FT.
TEST PIT NO. <u>TP5</u>		

SIRRINE

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TEST PIT REPORT

TEST PIT NO. TP6

PROJECT: MEDLEY FARMS SITE REMEDIAL INVESTIGATION
CLIENT: MEDLEY FARM STEERING COMMITTEE
CONTRACTOR: FENN - VAC
EQUIPMENT USED: CASE 480 E RUBBER TIRE BACK-HOE

JOB NO: G-8026
LOCATION: SEE PLAN
ELEVATION: 664 FT.
DATE START: 23 FEB. 1989
DATE FINISH: 23 FEB. 1989
LOGGED BY: C. BUDINGER

DEPTH (FT)	SAMPLE NO./ DEPTH RANGE	STRATA CHANGE (FT)	FIELD CLASSIFICATION	REMARKS
		0.0	<u>Sandy Silt (ML)</u>	<ul style="list-style-type: none"> • Monitored with OVA during excavation. • No organic vapors detected in breathing space. • No lagoon - type structure observed. • Composite sample collected from dressed areas of pit walls in fill areas.
		0.5	Brown, mostly sandy silt, trace clay, trace gravel. Roots, leaves, a few plastic bags. - TOPSOIL -	
1			<u>Silt (ML)</u> Red to reddish - orange, mostly silt, few clay, trace sand, trace gravel. - RESIDUAL SOIL -	
2				
		2.5	Bottom of Exploration at 2.5 feet.	
3				
4				
5				
6				
7				

ASTM COMPONENT %

MOSTLY	50 - 100 %
SOME	30 - 45 %
LITTLE	15 - 25 %
FEW	5 - 10 %
TRACE	< 5 %

GROUND WATER		
DATE	TIME *	DEPTH FT.
2/23/89	0.5	-
NOT ENCOUNTERED	NE	* HRS. AFTER COMPLETION

PIT DIMENSIONS (FT)

40 x 2.5 x 2.5 = 250 CU. FT.
(L) (W) (D)

BOULDERS

12 INCH TO 18 INCH DIAM: NO. 0 = VOL. 0 CU. FT.
OVER 18 INCH DIAM: NO. 0 = VOL. 0 CU. FT.

TEST PIT NO. TP6

SIRRINE

ENVIRONMENTAL
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TEST PIT REPORT

TEST PIT NO. TP7

PROJECT: MEDLEY FARMS SITE REMEDIAL INVESTIGATION
CLIENT: MEDLEY FARM STEERING COMMITTEE
CONTRACTOR: FENN - VAC
EQUIPMENT USED: CASE 480 E RUBBER TIRE BACK-HOE

JOB NO: G-8026
LOCATION: SEE PLAN
ELEVATION: 668 FT.
DATE START: 22 FEB. 1989
DATE FINISH: 22 FEB. 1989
LOGGED BY: C. RUDINGER

DEPTH (FT)	SAMPLE NO./ DEPTH RANGE	STRATA CHANGE (FT)	FIELD CLASSIFICATION	REMARKS
		0.0	<u>Topsoil</u>	<ul style="list-style-type: none"> • Monitored with OVA during excavation. • No organic vapors detected in breathing zone. • One sampling location registered 4 ppm on OVA. • Water seeping out of fracture below topsoil - residual interface at one location in middle of trench. • Composite sample collected from dressed areas of pit walls for TCL/TAL analyses from fill locations.
		0.1		
		0.5	<u>Gravelly Sand And Silt (SW-SM)</u>	
1		0.5	Interlayered red - purple mostly sand, some gravel, little silt and green - gray mostly silt, little fine sand. Matted grasses noted at base of fill. - FILL -	
2			<u>Clayey Silt (ML)</u> Reddish - orange, mostly clayey silt, few fine well - rounded gravel, trace fine sand.	
		2.5	- RESIDUAL SOIL -	
3			Bottom of exploration at 2.5 feet.	
4				
5				
6				
7				

ASTM COMPONENT %

MOSTLY	50 - 100 %
SOME	30 - 45 %
LITTLE	15 - 25 %
FEW	5 - 10 %
TRACE	< 5 %

GROUND WATER			PIT DIMENSIONS (FT)	
DATE	TIME *	DEPTH FT.	<u>46</u>	<u>2.5</u> x <u>3</u> = <u>345</u> CU. FT.
<u>2/22/89</u>	<u>1600</u>	<u>1.0-1.5</u>	(L)	(W) (D)
NOT ENCOUNTERED			<h3>BOULDERS</h3> 12 INCH TO 18 INCH DIAM: NO. <u>0</u> = VOL. <u>0</u> CU. FT. OVER 18 INCH DIAM: NO. <u>0</u> = VOL. <u>0</u> CU. FT.	
* HRS. AFTER COMPLETION			TEST PIT NO. <u>TP7</u>	

SIRRINE

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TEST PIT REPORT

TEST PIT NO. TP8

PROJECT: MEDLEY FARMS SITE REMEDIAL INVESTIGATION
CLIENT: MEDLEY FARM STEERING COMMITTEE
CONTRACTOR: FENN - VAC
EQUIPMENT USED: CASE 480 E RUBBER TIRE BACK-HOE

JOB NO: G-8026
LOCATION: SEE PLAN
ELEVATION: 658 FT.
DATE START: 23 FEB. 1989
DATE FINISH: 23 FEB. 1989
LOGGED BY: C. BUDINGER

DEPTH (FT)	SAMPLE NO./ DEPTH RANGE	STRATA CHANGE (FT)	FIELD CLASSIFICATION	REMARKS
		0.0	<u>Sandy Silt (ML)</u>	<ul style="list-style-type: none"> Monitored with OVA during excavation.
		0.25	Brown, sandy silt, trace clay. Roots and leaves. - TOPSOIL -	
1			Hard to soft, severely weathered, light brown, yellow and orange, fine grained Schist; tight, rough, steeply dipping joints (relict bedding). - SAPROLITE -	<ul style="list-style-type: none"> Organic vapors not detected by OVA in breathing zone when residual soil section of test pit was excavated.
2				
		2.5	Bottom of Exploration at 2.5 feet.	
3				<ul style="list-style-type: none"> Organic vapors detected in weathered schist at 4 ppm in breathing zone. Pit was excavated through soil and weathered bedrock. High angle contact between weathered schist (saprolite) and residual soil exposed in test pit. No fill or lagoon - type feature noted. Composite sample taken from clayey sections of weathered schist for TCL/TAL analysis.
4				
5				
6				
7				
GROUND WATER			PIT DIMENSIONS (FT)	
DATE	TIME *	DEPTH FT.	$\frac{38.0}{(L)} \times \frac{2.5}{(W)} \times \frac{2.0}{(D)} = \underline{190} \text{ CU. FT.}$	
2/23/89	0.25	-		
NOT ENCOUNTERED			BOULDERS	
NE			12 INCH TO 18 INCH DIAM: NO. <u>0</u> = VOL. <u>0</u> CU. FT. OVER 18 INCH DIAM: NO. <u>0</u> = VOL. <u>0</u> CU. FT.	
* HRS. AFTER COMPLETION			TEST PIT NO. <u>TP8</u>	

ENVIRONMENTAL CONSULTANTS

TEST PIT NO. TP9

PROJECT: MEDLEY FARMS SITE REMEDIAL INVESTIGATION
CLIENT: MEDLEY FARM STEERING COMMITTEE
CONTRACTOR: FENN - VAC
EQUIPMENT USED: CASE 480 E RUBBER TIRE BACK-HOE

JOB NO: G-8026
LOCATION: SEE PLAN
ELEVATION: 674 FT.
DATE START: 7 MAR.1989
DATE FINISH: 7 MAR. 1989
LOGGED BY: C. BUDINGER

DEPTH (FT)	SAMPLE NO./ DEPTH RANGE	STRATA CHANGE (FT)	FIELD CLASSIFICATION	REMARKS
		0.0	<u>Silty Sand (SM)</u>	<ul style="list-style-type: none"> Monitored with OVA during excavation. No organic vapors were detected in breathing zone.
		0.3	Brown - gray, moist, mostly fine sand, some silt, few medium to coarse sand with numerous roots and occasional pockets of yellow and purple stained soils. Gray ash - like material present.	
1		0.3	- TOPSOIL / FILL -	
			<u>Silty Clay (CL)</u>	
			Mottled red - brown and yellow - brown, slightly moist, mostly silty clay, few sand, trace quartz gravel.	
2		2.0	- FILL / RESIDUAL SOIL -	
		2.0	<u>Silty Clay (CL)</u>	
			Dense, red - brown, moist, mostly silty clay, trace to few sand, occasional quartz gravel.	
3			- RESIDUAL SOIL -	
		3.5	Bottom of exploration at 3.5 feet.	
4				
5				
6				
7				
				ASTM COMPONENT %
				MOSTLY 50 - 100 % SOME 30 - 45 % LITTLE 15 - 25 % FEW 5 - 10 % TRACE < 5 %
GROUND WATER			PIT DIMENSIONS (FT)	
DATE	TIME *	DEPTH FT.		
3/7/89	0.25	-	$\frac{75}{(L)} \times \frac{3.0}{(W)} \times \frac{3.5}{(D)} = \frac{787.5}{\text{CU. FT.}}$	
NOT ENCOUNTERED			BOULDERS 12 INCH TO 18 INCH DIAM: NO. <u>0</u> = VOL. <u>0</u> CU. FT. OVER 18 INCH DIAM: NO. <u>0</u> = VOL. <u>0</u> CU. FT.	
NE			* HRS. AFTER COMPLETION TEST PIT NO. <u>TP9</u>	

SIRRINE

ENVIRONMENTAL
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TEST PIT REPORT

TEST PIT NO. TP10

PROJECT: MEDLEY FARMS SITE REMEDIAL INVESTIGATION
CLIENT: MEDLEY FARM STEERING COMMITTEE
CONTRACTOR: FENN - VAC
EQUIPMENT USED: CASE 480 E RUBBER TIRE BACK-HOE

JOB NO: G-8026
LOCATION: SEE PLAN
ELEVATION: 664 FT.
DATE START: 8 MAR. 1989
DATE FINISH: 8 MAR. 1989
LOGGED BY: C. BUDINGER

DEPTH (FT)	SAMPLE NO/ DEPTH RANGE	STRATA CHANGE (FT)	FIELD CLASSIFICATION	REMARKS
1		0.0	Silty Gravel (GM)	<ul style="list-style-type: none">• Monitored with OVA during excavation.• No organic vapors were detected in breathing zone.
		0.3	Gray - green to brown with purple zones, mostly gravel, few fine to coarse sand, some silt, trace clay.	
		0.3	- TOPSOIL / FILL -	
2			Silt With Gravel (ML) Loose, reddish - orange, slightly moist, mostly silt, little fine, rounded gravel, few clay, many voids and fractures. Water "sweating" from pit walls.	
			- RESIDUAL SOIL -	
		2.5		
3			Clayey Silt (ML-CL) Dense, reddish - orange, moist, mostly silt, some clay, few fine sand with occasional coarse gravel or cobble.	
			- SAPROLITE -	
4			Bottom of exploration at 3.0 feet.	
5				
6				
7				
				ASTM COMPONENT %
				MOSTLY 50 - 100 %
				SOME 30 - 45 %
				LITTLE 15 - 25 %
				FEW 5 - 10 %
				TRACE < 5 %

GROUND WATER		
DATE	TIME *	DEPTH FT.
3/8/89	0.25	0.5-3.0
NOT ENCOUNTERED		* HRS. AFTER COMPLETION

PIT DIMENSIONS (FT)		
<u>60</u> (L)	x <u>2.5</u> (W)	x <u>3.5</u> (D) = <u>525</u> CU. FT.
BOULDERS		
12 INCH TO 18 INCH DIAM:	NO. <u>0</u>	= VOL. <u>0</u> CU. FT.
OVER 18 INCH DIAM:	NO. <u>0</u>	= VOL. <u>0</u> CU. FT.
TEST PIT NO. <u>TP 10</u>		

TEST PIT NO. TP 11

JOB NO: G-8026
LOCATION: SEE PLAN
ELEVATION: 661
DATE START: 12/15/89
DATE FINISH: 12/15/89
LOGGED BY: R. L. BURDINE

DEPTH (FT)	SAMPLE NO./ DEPTH RANGE	STRATA CHANGE (FT)	FIELD CLASSIFICATION	REMARKS										
1			<p>Note: Surface erosion in this area; very little to no topsoil.</p> <p>SILTY CLAY (CL) Dense, reddish-orange, slightly moist, mostly clay, some silt, little mica.</p> <p>-RESIDUAL SOIL-</p>	<ul style="list-style-type: none"> Monitored with OVA during excavation No Organic Vapors were detected in breathing zone while excavating. But there is a strong organic odor. 										
2				<ul style="list-style-type: none"> Vertical rock layer at 12.5 ft. North end of pit. Rock is a Mica Schist. The layer is .8 ft. wide. 										
3				<ul style="list-style-type: none"> Sampled for volatile organics and semi-volatile organics. 										
4														
5														
6			BOTTOM OF EXPLORATION AT 5.5 FT.	<p>ASTM COMPONENT %</p> <table> <tr> <td>MOSTLY</td> <td>50 - 100 %</td> </tr> <tr> <td>SOME</td> <td>30 - 45 %</td> </tr> <tr> <td>LITTLE</td> <td>15 - 25 %</td> </tr> <tr> <td>FEW</td> <td>5 - 10 %</td> </tr> <tr> <td>TRACE</td> <td>< 5 %</td> </tr> </table>	MOSTLY	50 - 100 %	SOME	30 - 45 %	LITTLE	15 - 25 %	FEW	5 - 10 %	TRACE	< 5 %
MOSTLY	50 - 100 %													
SOME	30 - 45 %													
LITTLE	15 - 25 %													
FEW	5 - 10 %													
TRACE	< 5 %													
7														

GROUND WATER			PIT DIMENSIONS (FT)	
DATE	TIME *	DEPTH FT.		
12/15/89			$\frac{32}{(L)} \times \frac{2.5}{(W)} \times \frac{5.5}{(D)} = \underline{440} \text{ CU. FT.}$	

BOULDERS	
12 INCH TO 18 INCH DIAM: NO. <u>0</u> = VOL. <u>0</u> CU. FT.	
OVER 18 INCH DIAM: NO. <u>0</u> = VOL. <u>0</u> CU. FT.	

NOT ENCOUNTERED	X	* HRS. AFTER 1/2 COMPLETION

TEST PIT NO.	TP 11

TEST PIT REPORT

TEST PIT NO. TP 12

PROJECT: MEDLEY FARMS RI/FS
CLIENT: MEDLEY FARM STEERING COMMITTEE
CONTRACTOR: E. D. & S., INC.
EQUIPMENT USED: CASE 580 E RUBBER TIRE BACK-HOE

JOB NO: G-8026
LOCATION: SEE PLAN
ELEVATION: 664
DATE START: 12/15/89
DATE FINISH: 12/15/89
LOGGED BY: R. L. BURDINE

DEPTH (FT)	SAMPLE NO./ DEPTH RANGE	STRATA CHANGE (FT)	FIELD CLASSIFICATION	REMARKS
1			<u>CLAYEY SILT (ML)</u> Loose, brown, slightly moist, mostly silt, some clay, little fine sand; rootlets and organic debris from vegetation. ----- <u>-TOPSOIL-</u> -----	<ul style="list-style-type: none"> Monitored with OVA during excavation No Organic Vapors were detected in breathing zone while excavating.
2			<u>SILT (ML)</u> Loose, tan, slightly moist, mostly silt, little clay, little fine sand. ----- <u>-Possibly fill (Appears Disturbed)-</u> -----	<ul style="list-style-type: none"> Some purple staining at surface in Topsoil.
3			<u>SILTY CLAY (CL)</u> Dense, reddish-orange, slightly moist, mostly clay, little silt, trace mica. ----- <u>-RESIDUAL SOIL-</u> -----	<ul style="list-style-type: none"> Sampled for volatile organics and semi-volatile. Water seeping into pit from various locations throughout the pit. It appears most seeps are located between 1.0 to 2.5 ft.
4				
5			BOTTOM OF EXPLORATION AT 4.5 FT.	
6				
7				ASTM COMPONENT % MOSTLY 50 - 100 % SOME 30 - 45 % LITTLE 15 - 25 % FEW 5 - 10 % TRACE < 5 %

GROUND WATER			PIT DIMENSIONS (FT)	
DATE	TIME *	DEPTH FT.		
12/15/89	-	-	$\frac{35}{(L)} \times \frac{2.5}{(W)} \times \frac{4.5}{(D)} = \frac{394}{\text{CU. FT.}}$	

BOULDERS	
12 INCH TO 18 INCH DIAM:	NO. <u>0</u> = VOL. <u>0</u> CU. FT.
OVER 18 INCH DIAM:	NO. <u>0</u> = VOL. <u>0</u> CU. FT.
NOT ENCOUNTERED	X
* HRS. AFTER 1/2 COMPLETION	

TEST PIT NO.	TP 12
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ENVIRONMENTAL CONSULTANTS

TEST PIT REPORT

TEST PIT NO. TP 15

PROJECT: MEDLEY FARMS R/FS
CLIENT: MEDLEY FARM STEERING COMMITTEE
CONTRACTOR: E. D. & S., INC.
EQUIPMENT USED: CASE 580 E RUBBER TIRE BACK-HOE

JOB NO: G-8026
LOCATION: SEE PLAN
ELEVATION: 669
DATE START: 12/16/89
DATE FINISH: 12/16/89
LOGGED BY: B. L. BURDINE

DEPTH (FT)	SAMPLE NO./ DEPTH RANGE	STRATA CHANGE (FT)	FIELD CLASSIFICATION	REMARKS
-1-			<u>SILT (ML)</u> Loose, gray, dry, mostly silt, little clay, trace gravel; rootlets and organic debris, from vegetation. -TOPSOIL- <u>CLAYEY SILT (ML)</u> Mottled gray and reddish-orange, slightly moist, mostly silt, some clay, trace quartz gravel. -FILL-	<ul style="list-style-type: none"> Monitored with OVA during excavation No Organic Vapors were detected in breathing zone while excavating.
-2-				
-3-				
-4-			<u>SILTY CLAY (CL)</u> Dense, reddish-orange, slightly moist, mostly clay, little silt, trace mica. -RESIDUAL SOIL-	
-5-				
-6-				
-7-			BOTTOM OF EXPLORATION AT 6.5 FT.	ASTM COMPONENT % MOSTLY 50 - 100 % SOME 30 - 45 % LITTLE 15 - 25 % FEW 5 - 10 % TRACE < 5 %
GROUND WATER			PIT DIMENSIONS (FT)	
DATE	TIME *	DEPTH FT.	<div style="text-align: center;"> $\frac{29}{(L)} \times \frac{2.5}{(W)} \times \frac{6.5}{(D)} = \underline{471} \text{ CU. FT.}$ </div>	
12/16/89	-	-		
NOT ENCOUNTERED X			* HRS. AFTER COMPLETION	
			BOULDERS 12 INCH TO 18 INCH DIAM: NO. <u>0</u> = VOL. <u>0</u> CU. FT. OVER 18 INCH DIAM: NO. <u>0</u> = VOL. <u>0</u> CU. FT.	
			TEST PIT NO. TP 15	

ENVIRONMENTAL CONSULTANTS

TEST PIT NO. TP 16

PROJECT: MEDLEY FARMS R/FS
CLIENT: MEDLEY FARM STEERING COMMITTEE
CONTRACTOR: E. D. & S., INC.
EQUIPMENT USED: CASE 580 E RUBBER TIRE BACK-HOE

JOB NO: G-8026
LOCATION: SEE PLAN
ELEVATION: 667
DATE START: 12/16/89
DATE FINISH: 12/16/89
LOGGED BY: B. L. BURDINE

DEPTH (FT)	SAMPLE NO./ DEPTH RANGE	STRATA CHANGE (FT)	FIELD CLASSIFICATION	REMARKS
- 1 -			<u>CLAYEY SILT (ML)</u> Loose, tan to yellowish-orange, slightly moist, mostly silt, some clay, little fine sand; rootlets and organic debris, from vegetation. <div style="text-align: center;">-TOPSOIL-</div>	<ul style="list-style-type: none"> Monitored with OVA during excavation No Organic Vapors were detected in breathing zone while excavating. <p>This pit cut across an existing ditch to investigate the possibility of this being from an old lagoon. The ditch was found to be only surficial and had no physical characteristics below ground surface.</p>
- 2 -			<u>SILTY CLAY (CL)</u> Dense, reddish-orange, slightly moist, mostly clay, some silt, trace quartz gravel and fine sand. <div style="text-align: center;">-FILL-</div>	
- 3 -				
- 4 -				
- 5 -			<u>CLAYEY SILT WITH SAND (ML)</u> Loose, tan, slightly moist, mostly silt, some clay, little fine sand. <div style="text-align: center;">-RESIDUAL SOIL-</div>	
- 6 -			BOTTOM OF EXPLORATION AT 6.0 FT.	
- 7 -				ASTM COMPONENT % MOSTLY 50 - 100 % SOME 30 - 45 % LITTLE 15 - 25 % FEW 5 - 10 % TRACE < 5 %

GROUND WATER			PIT DIMENSIONS (FT)	
DATE	TIME *	DEPTH FT.		
12/16/89	-	-	$\frac{30}{(L)} \times \frac{2.5}{(W)} \times \frac{6.0}{(D)} = \underline{\quad 450 \quad}$ CU. FT.	

		BOULDERS	
NOT ENCOUNTERED	X	* HRS. AFTER COMPLETION	
			12 INCH TO 18 INCH DIAM: NO. <u>0</u> = VOL. <u>0</u> CU. FT. OVER 18 INCH DIAM: NO. <u>0</u> = VOL. <u>0</u> CU. FT.
			TEST PIT NO. TP 16

APPENDIX D
TEST BORING REPORTS

GUIDELINES FOR VISUAL-MANUAL IDENTIFICATION/CLASSIFICATION OF ROCK CORE

Rock core descriptions consist of the following factors, in the order presented: Field harness, weathering, color, grain size/texture, LITHOLOGY; fracture spacing characteristics and attitude; bedding and foliation; additional characteristics as required (rock continuity, etc.).

FIELD HARDNESS: A measure of resistance to scratching or abrasion.

Very hard - Cannot be scratches with knife or sharp pick. Breaking of hand specimens requires several hard blows of geologist's pick.

Hard - Can be scratched with knife or pick only with difficulty. Hard blow of hammer required to detach hand specimen.

Moderately hard - Can be scratched with knife or pick. Gouges or grooves to 1/4 in. deep can be excavated by hard blow of point of a geologist's pick. Hand specimens can be detached by moderate blow.

Medium - Can be grooved or gouged 1/16 in. deep by firm pressure on knife or pick point. Can be excavated in small chips to pieces about 1 in. maximum size by hard blows of the point of a geologist's pick.

Soft - Can be gouged or grooved readily with knife or pick point. Can be excavated in chips to pieces several inches in size by moderate blows of a pick point. Small thin pieces can be broken by finger pressure.

Very soft - Can be carved with knife. Can be excavated readily with point of pick. Pieces 1 in. or more in thickness can be broken with finger pressure. Can be scratched readily by fingernail.

WEATHERING: The action of the elements in altering the color, texture, and composition of the rock.

Fresh - Rock fresh, crystals bright, few joints may show slight staining. Rock rings under hammer if crystalline.

Very slight - Rock generally fresh, joints stained, some joints may show thin clay coatings, crystals in broken face show bright. Rock rings under hammer if crystalline.

Slight - Rock generally fresh, joints stained, and discoloration extends into rock up to 1 in. Joints may contain clay. In granitoid rock some occasional feldspar crystals are dull and discolored. Crystalline rocks ring under hammer.

Moderate - Significant portions of rock show discoloration and weathering effects. In granitoid rocks, most feldspars are dull and discolored; some show clayey. Rock has dull sound under hammer and shows significant loss of strength as compared with fresh rock.

Moderately severe - All rock except quartz discolored or stained. In granitoid rocks, all feldspars dull and discolored and majority show kaolinization. Rock shows severe loss of strength and can be excavated with geologist's pick. Rock goes "clunk" when struck.

Severe - All rock except quartz discolored or stained. Rock "fabric" clear and evident, but reduced in strength to strong soil. In granitoid rocks, all feldspars kaolinized to some extent. Some fragments of strong rock usually left. (Saprolite)

Very severe - All rock except quartz discolored stained. Rock "fabric" clear and evident, but mass effectively reduced to "soil" with only fragments of strong rock remaining. (Saprolite)

Complete - Rock reduced to "soil". Rock "fabric" not discernible or discernible only in small scattered locations. Quartz may be present as dikes or stringers (Residual Soil)

COLOR: The GSA Rock-Color Chart based on the Munsell System will be used where required to ensure uniformity.

GRAIN SIZE/TEXTURE: Terminology used to identify size, shape, and arrangement of constituent elements.

Aphanitic - Too small to be seen with the naked eye.

Coarse Grained - 2.0 mm to 4.76 mm (approx. 1/4 in.)

Fine Grained - Barely distinguishable to the naked eye/ < 0.4 mm.

Very Coarse Grained - > 4.76 mm.

Medium Grained - 0.4 mm to 2.0 mm (approx. 1/16 in.)

Note: Include other specialized terms as needed, ex., porphyritic, porphyroblastic, etc.

GUIDELINES FOR VISUAL-MANUAL IDENTIFICATION/CLASSIFICATION OF ROCK CORE

LITHOLOGY: Rock Type

Based on "Classification of Rocks" by Russell B. Travis, Quarterly of the Colorado School of Mines, Vol. 50, January 1955.

FRACTURE TYPES:

Joint - A simple fracture along which no shear displacement has occurred. May form joint sets.

Shear - A major fracture along which there has been appreciable displacement and accompanied by gouge and/or a severely fractured zone.

Fault - A major fracture along which there has been appreciable displacement and accompanied by gouge and/or a severely fractured adjacent zone.

Shear or Fault Zone - A band or zone of parallel, closely spaced shears or faults.

FRACTURE CHARACTERISTICS:
Roughness

- rough
- smooth
- slickensided

Aperture (distance between fracture walls)

- Tight - < 0.25 mm
- Open - > 0.25 mm

Filling

 Healed - Completely filled by secondary mineralization.
 Indicate minerals present.

Staining

- Describe color and apparent mineralogy of surface staining.

Soil Filled - Indicate aperture and soil type present.

SPACING AND ATTITUDE OF FRACTURES, BEDDING, AND FOLIATION

Fractures	Bedding and Foliation	Spacing*	Attitude	Angle
Very close	Very thin	Less than 2 in.	Horizontal	0° - 5°
Close	Thin	2 in. - 1 ft.	Shallow or low angle	5° - 35°
Moderately Close	Medium	1 ft. - 3 ft.	Moderately dipping	35° - 55°
Wide	Thick	3 ft. - 10 ft.	Steep or high angle	55° - 85°
Very wide	Very thick	More than 10 ft.	Vertical	85° - 90°

* Note: Spacing refers to perpendicular distance between discontinuities.

ROCK CONTINUITY: Any assessment of all inherent breaks, in rock whether or not there has been relative displacement.
 (Other than drill breaks)

Extremely Fractured = Drill core stem less than 1 in.

Sound - Drill core stem greater than 8 in.

ROCK QUALITY DESIGNATION (RQD)

$$\text{RQD in \%} = \frac{\text{Length of Core in Pieces 4 in. and Longer} \times 100}{\text{Length of Run}}$$

Additional characteristics to note include: cavities, voids, secondary mineralization, fossils, etc.

EXAMPLE:

Hard, slightly weathered, gray, aphanitic ARGILLITE; closely spaced, smooth, tight, and planar, steeply dipping joints; minor open (1/4 inch) shear with clay gouge parallel to bedding at 40 ft., very thin, horizontal bedding; occasional calcareous solution pits (1/4 inch dia.).

- CAMBRIDGE ARGILLITE -

BORING NO. SW1

PREPARED BY: R. L. Burdine

BLOWS/FT. DENSITY		BLOWS/FT. CONSISTENCY		SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPLIT SPOON	MOSTLY 50 - 100%	WD - WHILE DRILLING NE - NOT ENCOUNTERED UR - NOT READ
5 - 10	LOOSE	3 - 4	SOFT	T TUBE	SOME 30 - 45%	
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 25%	
31 - 50	DENSE	9 - 15	STIFF	G GRAB SAMPLE	FEW 5 - 10%	
51+	VERY DENSE	16 - 30	VERY STIFF	X OTHER	TRACE <5%	
		31+	HARD	NR NO RECOVERY		BORING NO. SW1

SIRRINE

ENVIRONMENTAL
CONSULTANTS

TEST BORING REPORT

BORING NO. SW3

PROJECT: MEDLEY FARM R/F/S
CLIENT: MEDLEY FARM STEERING COMMITTEE
CONTRACTOR: ENVIRONMENTAL DRILLING & SERVICES
EQUIPMENT USED: MOBILE DRILL B-57

JOB NO: G-8026
PAGE NO: 1 of 4
LOCATION: See Plan
ELEVATION: 669.90
DATE START: 6/19/89
DATE FINISH: 6/26/89
DRILLER: D. G. Fitzpatrick
PREPARED BY: R. L. Burdine

GROUND WATER		DEPTH TO: (ft.)			CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	HSA	S
6/23/89	WD	67.3	72.0	72.7	SIZE ID	6 1/4 In.	1 3/8 In.
6/26/89	48	66.64	77.0	79.0	HAMMER WT	140 lbs.	
					HAMMER FALL	30 In.	

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0		3	S1	5.0	<u>SILT (ML)</u> Soft, reddish orange, dry, mostly silt, trace clay, quartz pebbles, and mica. -RESIDUAL SOIL-
		4		--	
		6		7.0	
		6			
10.0		4	S2	10.0	<u>SILT WITH SAND (ML)</u> Medium dense, red to tan to silver-gray, dry, mostly silt, few fine to medium sand, little mica. -SAPROLITE-
		8		--	
		9		12.0	
		7			
15.0		4	S3	15.0	<u>SILT WITH SAND (ML)</u> Soft, reddish-pink, tan, and orange, mostly silt, little fine sand, trace clay, trace mica. -SAPROLITE-
		5		--	
		5		17.0	
		8			
20.0					

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPUT SPOON	MOSTLY 50 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T TUBE	SOME 30 - 45%	NE - NOT ENCOUNTERED
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 25%	UR - NOT READ
31 - 50	DENSE	9 - 15	STIFF	G GRAB SAMPLE	FEW 5 - 10%	
51+	VERY DENSE	16 - 30	VERY STIFF	X OTHER	TRACE <5%	
		31+	HARD	NR NO RECOVERY		

BORING NO. SW3

ENVIRONMENTAL CONSULTANTS

TEST BORING REPORT

PAGE 3 OF 4

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
45.0		9	S9	45.0	<u>SILT WITH SAND (ML)</u> Medium stiff, gray to tan, dry mostly silt, little fine sand, few mica, trace clay. -SAPROLITE-
		9		--	
		9			
		16		47.0	
50.0		9	S10	50.0	<u>SILT (ML)</u> Loose to medium dense, tan to yellowish orange, dry, mostly silt, little mica, trace clay, weakly foliated. -SAPROLITE-
		14		--	
		16			
		18		52.0	
55.0		6	S11	55.0	<u>SILT (ML)</u> Loose to medium dense, tan to yellowish orange, dry, mostly silt, little mica, trace clay, weakly foliated. -SAPROLITE-
		10		--	
		25			
		27		57.0	
60.0		12	S12	60.0	<u>SILT (ML)</u> Loose to medium dense, tan to yellowish orange, dry, mostly silt, little mica, trace clay, weakly foliated. -SAPROLITE-
		22		--	
		22			
		50		62.0	
65.0		30	S13	65.0	<u>SILT (ML)</u> Loose to medium dense, tan to yellowish orange, dry, mostly silt, little mica, trace clay, weakly foliated. -SAPROLITE-
		50/5 in.		--	
				66.0	
					Auger Refusal at 65.0 ft.
70.0					

Note:

No water has been encountered. Due to this fact a 5 7/8 inch tri-cone roller bit will be used to drill out the end of the lead auger and potable water will be used as drilling fluid.

BLOWS/FT. DENSITY		BLOWS/FT. CONSISTENCY		SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPLIT SPOON	MOSTLY 50 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T TUBE	SOME 30 - 45%	NE - NOT ENCOUNTERED
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 25%	UR - NOT READ
31 - 50	DENSE	9 - 15	STIFF	G GRAB SAMPLE	FEW 5 - 10%	
51 +	VERY DENSE	16 - 30	VERY STIFF	X OTHER	TRACE < 5%	
		31 +	HARD	NR NO RECOVERY		

BORING NO. SW3

SIRRINE

ENVIRONMENTAL
CONSULTANTS

TEST BORING REPORT

BORING NO. SW3

PAGE 4 OF 4

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
70.0					<p>Note:</p> <p>At 70.5 ft. drilling becomes difficult. Appears that it is weathered rock. From drill cuttings it appears to be a GNEISS.</p>
75.0					<p>Bottom of Exploration at 79.0 ft.</p> <p>Note:</p> <p>A 2 inch well was installed in the borehole. Stainless steel screened was placed from 61.5 to 77.0 ft. with a PVC riser to the surface.</p>
80.0					
85.0					
90.0					
95.0					

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPLIT SPOON	MOSTLY 50 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T TUBE	SOME 30 - 45%	NE - NOT ENCOUNTERED
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 25%	UR - NOT READ
31 - 50	DENSE	9 - 15	STIFF	G GRAB SAMPLE	FEW 5 - 10%	
51 +	VERY DENSE	16 - 30	VERY STIFF	X OTHER	TRACE <5%	
		31 +	HARD	NR NO RECOVERY		

BORING NO. SW3

SIRRINE

ENVIRONMENTAL
CONSULTANTS

TEST BORING REPORT

BORING NO. SW4

PROJECT: MEDLEY FARM R/FS

CLIENT: MEDLEY FARM STEERING COMMITTEE

CONTRACTOR: ENVIRONMENTAL DRILLING & SERVICES

EQUIPMENT USED: MOBILE DRILL B-57

JOB NO: G-8026

PAGE NO: 1 of 4

LOCATION: See Plan

ELEVATION: 668.68

DATE START: 7/6/89

DATE FINISH: 7/12/89

DRILLER: D. G. Fitzpatrick

PREPARED BY: R. L. Burdine

GROUND WATER		DEPTH TO: (ft.)			CASING		SAMPLER	CORE
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	HSA	S	BARREL
7/7/89	WD	62.0	65.0	65.0	SIZE ID	61/4 in.	1 3/8 in.	
					HAMMER WT		140 lbs.	
					HAMMER FALL		30 in.	

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0		6	S1	5.0	SILTY CLAY (CL) Medium stiff, reddish-orange, dry, mostly clay, some silt, trace mica. -RESIDUAL SOIL-
		7		-	
		16			
		11		7.0	
10.0		3	S2	10.0	----- SILT (ML) Soft, tan to orangish, dry, mostly silt, few clay, trace mica. -SAPROLITE (Metasediment)-
		3		-	
		3			
		3		12.0	
15.0		8	S3	15.0	SILT (ML) Medium stiff, tan, moist, mostly silt, few clay. -SAPROLITE (Metasediment)-
		7		-	
		8			
		9		17.0	
20.0					

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPLIT SPOON	MOSTLY 50 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T TUBE	SOME 30 - 45%	NE - NOT ENCOUNTERED
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 25%	UR - NOT READ
31 - 50	DENSE	9 - 15	STIFF	G GRAB SAMPLE	FEW 5 - 10%	
51+	VERY DENSE	16 - 30	VERY STIFF	X OTHER	TRACE <5%	
		31+	HARD	NR NO RECOVERY		BORING NO. SW4

SIRRINE

ENVIRONMENTAL
CONSULTANTS

TEST BORING REPORT

BORING NO. SW4

PAGE 2 OF 4

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS	
20.0		2	S4	20.0	<u>SILT (ML)</u> Medium stiff, tan, moist, mostly silt, few clay. -SAPROLITE (Metasediment)-	
		2		-		
		3				
		4		22.0		
25.0			S5		<u>SILT (ML)</u> Medium stiff, tan, dry, mostly silt, some very fine sand, trace mica; Sample has black stained relict joints and fractures. -SAPROLITE (Metasediment)-	
		4	25.0			
		5	-			
		7				
		7	27.0			
30.0			S6		<u>SILT (ML)</u> Medium stiff, tan, dry, mostly silt, some very fine sand, trace mica; Sample has black stained relict joints and fractures. -SAPROLITE (Metasediment)-	
		3	30.0			
		5	--			
		6				
		8	32.0			
35.0			S7		<u>SILT (ML)</u> Medium dense, gray, dry, mostly silt, little very fine sand, few mica. -SAPROLITE (Metasediment)-	
		9	35.0			
		7	--			
		12				
		24	37.0			
40.0			S8		<u>SILT (ML)</u> Medium dense, gray, dry, mostly silt, little very fine sand, few mica. -SAPROLITE (Metasediment)-	
		5	40.0			
		6	-			
		11				
		14	42.0			
45.0						
BLOWS/FT. DENSITY		BLOWS/FT. CONSISTENCY		SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPLIT SPOON	MOSTLY 50 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T TUBE	SOME 30 - 45%	NE - NOT ENCOUNTERED
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 25%	UR - NOT READ
31 - 50	DENSE	9 - 15	STIFF	G GRAB SAMPLE	FEW 5 - 10%	
51+	VERY DENSE	16 - 30	VERY STIFF	X OTHER	TRACE <5%	
		31+	HARD	NR NO RECOVERY		BORING NO. SW4

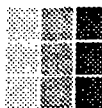
ENVIRONMENTAL CONSULTANTS

BORING NO. SW4

PAGE 3 OF 4

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
45.0		6	S9	45.0	<u>SILT (ML)</u> Medium dense, gray, dry, mostly silt, little very fine sand, few mica. -SAPROLITE (Metasediment)-
		13		--	
		18			
		32		47.0	
50.0			S10		<u>SANDY SILT (ML)</u> Dense, tan, dry, mostly silt, some fine sand, trace mica; streak of yellowish feldspar at 51.5 ft. Approx. .5 inch in width at about 40 angle. -SAPROLITE (Metasediment)- Note: Drilling became difficult at 52.5 ft.
		7		50.0	
		18		--	
		40		51.8	
55.0			S11		<u>SILT (ML)</u> Dense, gray, slightly moist, mostly silt, little fine sand, few mica. -SAPROLITE (Metasediment)-
		10		55.0	
		17		--	
		50/5 in.		56.4	
60.0			S12		<u>SILT (ML)</u> Dense, gray, slightly moist, mostly silt, little fine sand, few mica, trace phlogopite (brown mica). -SAPROLITE (Metasediment)-
		15		60.0	
		50/5 in.		60.9	
65.0			S13		<u>SILT (ML)</u> Dense, gray, slightly moist, mostly silt, little fine sand, few mica, trace phlogopite (brown mica). -SAPROLITE (Metasediment)-
		17		65.0	
		30		--	
		30		67.0	
70.0					

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPLIT SPOON	MOSTLY 50 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T TUBE	SOME 30 - 45%	NE - NOT ENCOUNTERED
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 25%	UR - NOT READ
31 - 50	DENSE	9 - 15	STIFF	G GRAB SAMPLE	FEW 5 - 10%	
51+	VERY DENSE	16 - 30	VERY STIFF	X OTHER	TRACE <5%	
		31+	HARD	NR NO RECOVERY		BORING NO. SW4



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TEST BORING REPORT

BORING NO. SW101 (HP101)

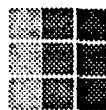
PROJECT: MEDLEY FARM R/FS PHASE II
CLIENT: MEDLEY FARM STEERING COMMITTEE
CONTRACTOR: ATLANTA TESTING & ENGINEERING
EQUIPMENT USED: CME-550 ATV

JOB NO: G-8026
PAGE NO: 1 of 2
LOCATION: See Plan
ELEVATION: 601.15
DATE START: 8/23/90
DATE FINISH: 8/27/90
DRILLER: K. Warren
PREPARED BY: R. Enright

GROUND WATER		DEPTH TO: (ft.)			CASING SAMPLER CORE		
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	HSA	S
8/24/90	15	30.05	-	34.3	SIZE ID	6 1/4 In.	1 3/8 In.
8/27/90	89	28.5	-	34.3	HAMMER WT		140 lbs.
8/28/90	111	28.1	-	34.3	HAMMER FALL		30 in.

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0		4	S1	4.0	<u>SILT (ML)</u> Stiff, dark yellowish-orange, dry, mostly silt, few clay, micaceous. -RESIDUAL SOIL-
		6		-	
		7			
		8		6.0	
10.0		6	S2	9.0	<u>SILT (ML)</u> Very stiff, grayish-orange to moderate yellowish-brown, dry, mostly silt, few clay, micaceous, relict foliation. -SAPROLITE-
		7		-	
		8			
		11		11.0	
15.0		50	S3	14.0	<u>SILT (ML)</u> Hard, grayish-orange to moderate yellowish-brown, dry, mostly silt, few clay, micaceous, relict foliation.
				14.5	
20.0		50/5 in.	S4	19.0	<u>SILT (ML)</u> Very stiff, grayish-orange to moderate yellowish-brown, dry, mostly silt, few clay, micaceous, relict foliation, few quartz gravel.
				19.5	

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPLIT SPOON	MOSTLY 50 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T TUBE	SOME 30 - 45%	NE - NOT ENCOUNTERED
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 25%	UR - NOT READ
31 - 50	DENSE	9 - 15	STIFF	G GRAB SAMPLE	FEW 5 - 10%	
51+	VERY DENSE	16 - 30	VERY STIFF	X OTHER	TRACE <5%	
		31+	HARD	NR NO RECOVERY		BORING NO. SW101



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TEST BORING REPORT

BORING NO. SW101

PAGE 2 OF 2

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS	
25.0			S5	24.0	SILT (ML) Hard, grayish-orange to moderate yellowish-brown, dry, mostly silt, few clay, trace fine sand, micaceous. -SAPROLITE-	
		50/3 in.		24.2		
30.0			S6	29.0	WELL-GRADED GRAVEL (GW) Very dense, grayish-orange to moderate yellowish-brown, moist, mostly gravel (schist and quartz), trace silt and fine sand, micaceous. -SAPROLITE (SCHIST)- Note: Drilling tough after 29.0 feet; no recovery and no sample at 34.0 feet.	
		50/1 in.		29.1		
35.0		50/0.0			AUGER REFUSAL AT 34.3 FEET. Note: Due to density of material, driving a hydropunch is not possible. Instead a 2.0 inch permanent monitoring well (SW101) was installed in the borehole. The stainless steel screened interval was from 23.85 feet to 33.85 feet with PVC riser pipe to the surface.	
40.0						
45.0						
BLOWS/FT. DENSITY		BLOWS/FT. CONSISTENCY		SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPLIT SPOON	MOSTLY 80 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T TUBE	SOME 30 - 45%	NE - NOT ENCOUNTERED
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 25%	UR - NOT READ
31 - 50	DENSE	9 - 15	STIFF	G GRAB SAMPLE	FEW 5 - 10%	
51+	VERY DENSE	16 - 30	VERY STIFF	X OTHER	TRACE <5%	
		31+	HARD	NR NO RECOVERY		BORING NO. SW101



BORING NO. SW102 (HP102)

PROJECT:	MEDLEY FARM R/F'S PHASE II
CLIENT:	MEDLEY FARM STEERING COMMITTEE
CONTRACTOR:	ATLANTA TESTING & ENGINEERING
EQUIPMENT USED:	CME-75 TRUCK MOUNTED DRILL

JOB NO:	G-8026
PAGE NO:	1 of 3
LOCATION:	See Plan
ELEVATION:	617.43
DATE START:	8/22/90
DATE FINISH:	8/23/90
DRILLER:	P. Bergman
PREPARED BY:	J. Harrigan

GROUND WATER		DEPTH TO: (ft)			CASING SAMPLER CORE			ELEVATION:
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	HSA	S	BARREL
8/23/90	WD	NE	49.14	49.14	SIZE 10	6 1/4 in.	1 3/8 in.	
8/23/90	2.0	37.44	48.58	50.00	HAMMER WT		140 lbs.	
					HAMMER FALL		30 in.	
DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS			
5.0					<u>SILTY CLAY (CL)</u> Moderate reddish-brown, trace mica, dry.			
10.0		5	S1	4.0	<u>CLAYEY SILT (ML)</u> Very stiff, moderate reddish-brown, mottled with dark yellowish-orange, dry, mostly silt, some clay, little mica.			
		8		-				
		8		6.0				
		11						
15.0		6	S2	9.0	<u>SILT (ML)</u> Stiff, dark yellowish-orange, mottled medium reddish-brown, dry, mostly silt, trace mica. Quartz layer with manganese.			
		5		-				
		4		11.0				
		6						
20.0		3	S3	14.0	<u>SILT (ML)</u> Stiff, yellowish-orange, dry, mostly silt, little mica, relic foliation.			
		5		-				
		6		16.0				
		7						
20.0		4	S4	19.0	<u>SILT (ML)</u> Medium dense, stiff, dark to pale yellowish-orange, dry, mostly silt, few mica; 4" quartz layer at 21 feet.			
		6		-				
					<u>SILT (ML)</u> Medium dense, stiff, dark to pale yellowish-orange, dry, mostly silt, few mica; 4" quartz layer at 21 feet. -SAPROLITE (QUARTZ-MICA SCHIST)			

BLOWS/FT. DENSITY		BLOWS/FT. CONSISTENCY		SAMPLE ID.		COMPONENT %	GROUND WATER ABBREV.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S	SPLIT SPOON	MOSTLY 80 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T	TUBE	SOME 20 - 45%	NE - NOT ENCOUNTERED
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U	UNDISTURBED PISTON	LITTLE 15 - 20%	UR - NOT READ
31 - 50	DENSE	9 - 16	STIFF	G	GRAB SAMPLE	FEW 5 - 10%	
51+	VERY DENSE	16 - 30	VERY STIFF	X	OTHER	TRACE <5%	
		31+	HARD	NR	NO RECOVERY		
							BORING NO. SW102

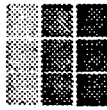


TEST BORING REPORT

BORING NO. SW102

PAGE 2 OF 3

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
25.0		6	S4	21.0	SILT (ML) Medium dense, stiff, dark to pale yellowish-orange, dry, mostly silt, few mica; 4" quartz layer at 21 feet. -SAPROLITE (QUARTZ - MICA SCHIST)- SILT (ML) Medium dense, very pale orange, mostly silt, dry, little mica, few very fine sand (quartz), foliation, driller reports tougher drilling. -SAPROLITE (QUARTZ-MICA SCHIST)- Note: Softer drilling at 28 feet. SILT (ML) Very dense, light gray to yellowish-gray, slightly moist, mostly silt, some mica, foliation. -SAPROLITE (QUARTZ-MICA SCHIST)- SILT (ML) Very dense, grayish-orange to dark greenish-gray, slightly moist, mostly silt, some mica, trace fine grain sand (quartz), relict banding. -SAPROLITE (QUARTZ-MICA SCHIST)- SILT (ML) Very dense, pale yellowish-orange, slightly moist, mostly silt, some mica, few fine grain sand (quartz). -SAPROLITE (QUARTZ-MICA SCHIST)- ----- SANDY SILT (ML) Very dense, olive gray, wet, mostly silt, little very coarse to fine grain sand (quartz), little mica. -TRANSITION ZONE-
		11			
	9	S5	24.0		
	14		-		
	14				
	13		26.0		



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TEST BORING REPORT

BORING NO. SW102

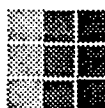
PAGE 3 OF 3

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
		50/3 In.	S10	48.0 48.2	<p>SILT (ML) Very dense, olive gray, saturated, mostly silt, some mica, little quartz; rock that is weathered, foliated (schist).</p> <p>-TRANSITION ZONE (QUARTZ-MICA SCHIST)-</p> <p>BOTTOM OF EXPLORATION AT 48.6 FEET.</p>
50.0					
55.0					
60.0					
65.0					
70.0					

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPLIT SPOON	MOSTLY 80 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T TUBE	SOME 20 - 45%	NE - NOT ENCOUNTERED
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 25%	UR - NOT READ
31 - 50	DENSE	9 - 15	STIFF	G GRAB SAMPLE	FEW 5 - 10%	
51+	VERY DENSE	16 - 30	VERY STIFF	X OTHER	TRACE <5%	
		31+	HARD	NR NO RECOVERY		

BORING NO. SW102

Note: Monitoring well SW-102 constructed in boring HP102 using 15 feet of 2-inch ID stainless steel screen and 38 feet of 2-inch ID PVC riser pipe. Screened interval is from 48.6 feet to 33.58 feet.



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TEST BORING REPORT

BORING NO. SW103 (HP103)

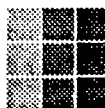
PROJECT: MEDLEY FARM R/FS PHASE II
CLIENT: MEDLEY FARM STEERING COMMITTEE
CONTRACTOR: ATLANTA TESTING & ENGINEERING
EQUIPMENT USED: CME-550 ATV

JOB NO: G-8026
PAGE NO: 1 of 3
LOCATION: See Plan
ELEVATION: 633.40
DATE START: 8/15/90
DATE FINISH: 8/16/90
DRILLER: K. Warren
PREPARED BY: R. Enright

GROUND WATER		DEPTH TO: (ft.)			CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	HSA	S
8/17/90	24	36.7	45.0	50.0	SIZE ID	6 1/4 in.	1 3/8 in.
					HAMMER WT	140 lbs.	
					HAMMER FALL	30 in.	

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0					
		6	S1	4.0	CLAYEY SILT (ML) Stiff, moderate reddish-brown, dry, mostly silt, little clay, mottled. -SAPROLITE-
		9		-	
		10		5.5	
10.0					
		8	S2	9.0	SILT (ML) Very stiff, yellowish-gray, dry, mostly silt, few clay. -SAPROLITE-
		8		-	
		7		11.0	
		10			
15.0					
		9	S3	14.0	SILT (ML) Very stiff, yellowish-gray, dry, mostly silt, few clay.
		11		-	
		10		16.0	
		13			
20.0					
		2	S4	19.0	SILT (ML) Very stiff, yellowish-gray, dry, mostly silt, few clay.
		10		-	

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPLIT SPOON	MOSTLY 80 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T TUBE	SOME 30 - 40%	NE - NOT ENCOUNTERED
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 20%	UR - NOT READ
31 - 50	DENSE	9 - 15	STIFF	G GRAB SAMPLE	FEW 5 - 10%	
51+	VERY DENSE	16 - 30	VERY STIFF	X OTHER	TRACE <5%	
		31+	HARD	NR NO RECOVERY		BORING NO. SW103



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TEST BORING REPORT

BORING NO. SW103

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DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
25.0		11	S4	21.0	<u>SILT (ML)</u> Very stiff, yellowish-gray, dry, mostly silt, few clay. ----- <u>SILT (ML)</u> Very stiff, yellowish-gray to dusky, slightly moist, mostly silt, few clay, relict foliation. -SAPROLITE-
		15			
		9	S5	24.0	
		10		-	
		14			
		13		26.0	
30.0					
		7	S6	29.0	
		10		-	
		11			
		15		31.0	
35.0					
		11	S7	34.0	
		15		-	
		21			
		27		36.0	
40.0					
		8	S8	39.0	
		30		-	
		50		40.5	
45.0					
					<u>SILT (ML)</u> Hard, yellowish-gray to dusky, wet, mostly silt, few clay, trace fine sand, relict foliation. -SAPROLITE- Note: Hydropunch refusal in dense saprolite at 44.8 feet.

					</

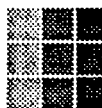


SIRRINE ENVIRONMENTAL CONSULTANTS TEST BORING REPORT

BORING NO. SW103

PAGE 3 OF 3

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TEST BORING REPORT

BORING NO. SW104 (HP104)

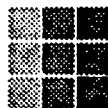
PROJECT: MEDLEY FARM R/F/S PHASE II
CLIENT: MEDLEY FARM STEERING COMMITTEE
CONTRACTOR: ATLANTA TESTING & ENGINEERING
EQUIPMENT USED: CME-550 ATV

JOB NO: G-8026
PAGE NO: 1 of 3
LOCATION: See Plan
ELEVATION: 647.46
DATE START: 8/16/90
DATE FINISH: 8/16/90
DRILLER: K. Warren
PREPARED BY: R. Burdine

GROUND WATER		DEPTH TO: (ft.)			CASING SAMPLER CORE			
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	HSA	S	BARREL
8/16/90	.5	37.5	36.0	39.5	SIZE 10	3 1/4 in.	1 3/8 in.	<input checked="" type="checkbox"/>
8/17/90	12	22.1	36.0	39.5	HAMMER WT	<input checked="" type="checkbox"/>	140 lbs.	<input checked="" type="checkbox"/>
					HAMMER FALL	<input checked="" type="checkbox"/>	30 in.	<input checked="" type="checkbox"/>

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0		5 8 6 7	S1	4.0 - 6.0	<u>SILT (ML)</u> Loose, dark yellowish-orange, dry, mostly silt. -SAPROLITE-
10.0		9 7 7 10	S2	9.0 - 11.0	<u>SILT (ML)</u> Loose, very pale orange to pale yellowish-orange, dry, mostly silt. -SAPROLITE-
15.0		15 50/5 in.	S3	14.0 - 15.0	<u>SILT (ML)</u> Loose, very pale orange to pale yellowish-orange, dry, mostly silt. -SAPROLITE-
20.0		50/1 in.	S4	19.0 19.1	No recovery.

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPLIT SPOON	MOSTLY 80 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T TUBE	SOME 20 - 40%	NE - NOT ENCOUNTERED
11 - 20	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 25%	UR - NOT READ
21 - 30	DENSE	9 - 15	STIFF	G GRAB SAMPLE	FEW 5 - 10%	
31+	VERY DENSE	16 - 30	VERY STIFF	X OTHER	TRACE < 5%	
		31+	HARD	NR NO RECOVERY		BORING NO. SW104



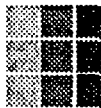
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TEST BORING REPORT

BORING NO. SW104

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DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS	
25.0			S5	24.0 24.5	No recovery. Note: Drilling extremely slow and difficult.	
30.0		50/5 in.	S6	29.0 29.2	<u>SANDY SILT (ML)</u> Very dense, pale yellowish-orange, dry, mostly silt, few fine sand, trace mica. -SAPROLITE (MICA SCHIST)- (TRANSITION ZONE)	
35.0		50/3 in.		34.0 34.4	No recovery.	
40.0					Note: approximately 2 feet of water in the borehole. ----- BOTTOM OF EXPLORATION AT 39.5 FEET.	
45.0					Note: Due to the density of the material a Hydropunch was not attempted. A 2.0 inch permanent monitoring well was installed. Stainless steel screen interval is from 19.98 to 35.0 feet with PVC riser to the surface.	
BLOWS/FT. DENSITY		BLOWS/FT. CONSISTENCY		SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPLIT SPOON	MOSTLY 80 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T TUBE	SOME 30 - 45%	NE - NOT ENCOUNTERED
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 25%	UR - NOT READ
31 - 50	DENSE	9 - 15	STIFF	G GRAB SAMPLE	FEW 5 - 10%	
51+	VERY DENSE	16 - 30	VERY STIFF	X OTHER	TRACE <5%	
		31+	HARD	NR NO RECOVERY		BORING NO. SW104



SIRRINE
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TEST BORING REPORT

BORING NO. SW106

PROJECT: MEDLEY FARM RVFS PHASE II
CLIENT: MEDLEY FARM STEERING COMMITTEE
CONTRACTOR: ATLANTA TESTING & ENGINEERING
EQUIPMENT USED: CME-550 ATV

JOB NO: G-8026
PAGE NO: 1 of 2
LOCATION: See Plan
ELEVATION: 592.91
DATE START: 8/28/90
DATE FINISH: 8/29/90
DRILLER: K. Warren
PREPARED BY: R. Enright

GROUND WATER			DEPTH TO: (ft)		CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	HSA	S
8/30/90	21	7.87	21	24	SIZE ID	6 1/4 in.	1 3/8 in.
					HAMMER WT	140 lbs.	
					HAMMER FALL	30 in.	

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0					
		6	S1	4.0	SILT (ML) Very stiff, moderate yellowish-brown to grayish-orange, moist, mostly silt, few clay, micaceous, relict foliation. -SAPROLITE (SCHIST)-
		7		--	
		11		6.0	
		9			
10.0					
		7	S2	9.0	Same as previous; except dark yellowish-brown to moderate yellowish-brown, trace fine sand. Note: Possible ground water at 14.0 feet.
		8		--	
		8		11.0	
		9			
15.0					
		4	S3	14.0	POORLY-GRADED SAND WITH CLAY (SP-SC) Dense, moderate yellowish-brown to grayish-orange, moist, mostly medium sand, few coarse and fine sand, few clay, micaceous, relict foliation. -SAPROLITE (SCHIST)-
		10		--	
		11		16.0	
		20			
20.0					
		12	S4	19.0	POORLY-GRADED SAND WITH SILT (SP-SM) Dense to very dense, light gray to black, wet, mostly medium sand, few fine sand, trace coarse sand, trace clay. -SAPROLITE (GRANITIC GNEISS)-
		24		--	

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPLIT SPOON	MOSTLY 80 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T TUBE	SOME 30 - 40%	NE - NOT ENCOUNTERED
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 25%	UR - NOT READ
31 - 60	DENSE	9 - 15	STIFF	G GRAB SAMPLE	FEW 5 - 10%	
61+	VERY DENSE	16 - 30	VERY STIFF	X OTHER	TRACE <5%	
		31+	HARD	NR NO RECOVERY		

BORING NO. SW106



ENVIRONMENTAL TEST BORING REPORT

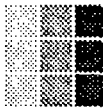
BORING NO. SW106

PAGE 2 OF 2

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS			
25.0		21	S4	21.0	POORLY-GRADED SAND WITH SILT (SP-SM) Dense to very dense, light gray to black, wet, mostly medium sand, few fine sand, trace coarse sand, trace clay. -SAPROLITE (GRANITIC GNEISS)- POORLY-GRADED SAND WITH SILT (SP-SM) Dense to very dense, light gray to black, wet, mostly medium sand, few fine sand, trace coarse sand, trace clay; 0.4 feet of light brown, micaceous silty saprolite on bottom of spoon. -SAPROLITE (GRANITIC GNEISS)-			
		29						
		12	S5	24.0				
		22		-				
		19		26.0				
		28						
30.0					BOTTOM OF EXPLORATION AT 26.0 FEET. Note: Installed 2.0-inch permanent monitoring well in the borehole. The stainless steel screened interval was from 5.82 feet to 21.00 feet with a PVC riser pipe to the surface.			
35.0								
40.0								
45.0								

BLOWS/FT. DENSITY		BLOWS/FT. CONSISTENCY		SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPLIT SPOON	MOSTLY 80 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T TUBE	SOME 30 - 45%	NE - NOT ENCOUNTERED
11 - 20	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 25%	UR - NOT READ
21 - 30	DENSE	9 - 15	STIFF	G GRAB SAMPLE	FEW 5 - 10%	
31 - 50	VERY DENSE	16 - 30	VERY STIFF	X OTHER	TRACE <5%	
51+		31+	HARD	NIR NO RECOVERY		

BORING NO. SW106



SIRRINE
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TEST BORING REPORT

BORING NO. SW108

PROJECT: MEDLEY FARM R/F'S PHASE II
CLIENT: MEDLEY FARM STEERING COMMITTEE
CONTRACTOR: ATLANTA TESTING & ENGINEERING
EQUIPMENT USED: CME-550 ATV

JOB NO: G-8026
PAGE NO: 1 of 2
LOCATION: See Plan
ELEVATION: 602.85
DATE START: 8/29/90
DATE FINISH: 8/30/90
DRILLER: K. Warren
PREPARED BY: J. Harrigan

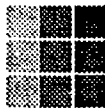
GROUND WATER		DEPTH TO: (ft.)			CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	HSA	S
8/30/90	14	5.46	NA	18.6	SIZE ID	6 1/4 In.	1 3/8 In.
					HAMMER WT	140 lbs.	
					HAMMER FALL	30 in.	

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0					
		5	S1	3.5	SILTY CLAY (CL) Stiff to very stiff, light gray, dry, mostly clay, some silt, few medium to fine grain sand (quartz), few mica. -RESIDUAL SOIL-
		17		--	
		16		5.5	
10.0		19			
15.0					
20.0		5	S2	8.5	SILT (ML) Very stiff, yellow-gray, slightly moist, mostly silt, some mica, few fine to medium grain sand; indistinct relict layering (mica). -SAPROLITE-
		9		--	
		10		10.5	
		15			
20.0					
20.0		11	S3	13.5	SILT (ML) Dense, yellowish-gray, slightly moist, mostly silt, some mica, few fine to medium grain sand; fine grained, relict layering. -SAPROLITE (QUARTZ-MICA SCHIST)-
		17		--	
		23		15.5	
		24			
20.0					
20.0		15	S4	18.5	SILT (ML) Very dense, hard, yellowish-gray, mostly silt, some mica, few fine to medium grain sand. -SAPROLITE (QUARTZ-MICA SCHIST)-
		34		--	
		51		20.0	

BOTTOM OF EXPLORATION AT 20.0 FEET

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPLIT SPOON	MOSTLY 50 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T TUBE	SOME 30 - 45%	NE - NOT ENCOUNTERED
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 25%	UR - NOT READ
31 - 50	DENSE	9 - 15	STIFF	X GRAB SAMPLE	FEW 5 - 10%	
51+	VERY DENSE	16 - 30	VERY STIFF	G OTHER	TRACE <5%	
		31+	HARD	NR NO RECOVERY		

BORING NO. SW108



SIRRINE
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TEST BORING REPORT

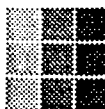
BORING NO. SW 108

PAGE 2 OF 2

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
					BOTTOM OF EXPLORATION AT 20.0 FEET.
25.0					
30.0					
35.0					
40.0					
45.0					

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPLIT SPOON	MOSTLY 50 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE	3 - 6	SOFT	T TUBE	SOME 20 - 45%	NE - NOT ENCOUNTERED
11 - 30	MEDIUM DENSE	6 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 25%	UR - NOT READ
31 - 50	DENSE	9 - 15	STIFF	Q GRAB SAMPLE	FEW 5 - 10%	
51+	VERY DENSE	16 - 30	VERY STIFF	X OTHER	TRACE <5%	
		31+	HARD	NR NO RECOVERY		

BORING NO. SW 108



SIRRINE
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TEST BORING REPORT

BORING NO. SW109

PROJECT: MEDLEY FARM R/F/S PHASE II
CLIENT: MEDLEY FARM STEERING COMMITTEE
CONTRACTOR: ATLANTA TESTING & ENGINEERING
EQUIPMENT USED: CME-550 ATV

JOB NO: G-8026
PAGE NO: 1 of 4
LOCATION: See Plan
ELEVATION: 658.65
DATE START: 9/10/90
DATE FINISH: 9/14/90
DRILLER: K. Warren
PREPARED BY: J. Harrigan

GROUND WATER		DEPTH TO: (ft)			CASING SAMPLER CORE		
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	HSA	S
9/11/90	WD	67.5	69.0	69.0	SIZE ID	6 1/4 In.	1 3/8 In.
					HAMMER WT		140 lbs.
					HAMMER FALL		30 In.

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
-5.0					
		6	S1	4.0	<u>SILT (ML)</u> Very stiff, medium brown, dry, mostly silt. -RESIDUAL SOIL-
		11		-	
		11			
		13		6.0	
-10.0					
		6	S2	9.0	<u>CLAY (CL)</u> Medium stiff, orange-red mottled with brown, dry, mostly clay. -RESIDUAL SOIL-
		6		-	
		6			
		8		11.0	
-15.0					
		6	S3	14.0	<u>SILT (ML)</u> Medium dense, light greenish-gray, dry, mostly silt, some mica flakes. -RESIDUAL SOIL-
		8		-	
		7			
		7		16.0	
-20.0					
		4	S4	19.0	<u>SILT (ML)</u> Medium dense, medium gray mottled with light gray, dry, mostly silt, some mica; relict bedding. -SAPROLITE (MICA SCHIST)-
		6		-	

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0-4	VERY LOOSE	0-2	VERY SOFT	S SPLIT SPOON	MOSTLY 80-100%	WD - WHILE DRILLING
5-10	LOOSE	3-4	SOFT	T TUBE	SOME 20-40%	NE - NOT ENCOUNTERED
11-30	MEDIUM DENSE	5-8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 10-20%	UR - NOT READ
31-50	DENSE	9-16	STIFF	G GRAB SAMPLE	FEW 5-10%	
51+	VERY DENSE	16-30	VERY STIFF	X OTHER	TRACE <5%	
		31+	HARD	NR NO RECOVERY		BORING NO. SW109



TEST BORING REPORT

BORING NO. SW109

PAGE 2 OF 4

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS	
25.0		7	S4	21.0	SILT (ML) Medium dense, medium gray mottled with light gray, dry, mostly silt, some mica; relict bedding. -SAPROLITE (MICA SCHIST)-	
		9				
		6	S5	24.0	SILT (ML) Medium dense, blue-gray mottled with greenish-gray, dry, mostly silt, some clay; relict banding. -SAPROLITE (MICA SCHIST)-	
		9		-		
		11				
		14		26.0		
30.0		10	S6	29.0	SILT (ML) Medium dense, blue-gray mottled with greenish-gray, dry, mostly silt, some clay; relict banding. -SAPROLITE (MICA SCHIST)-	
		18		-		
		19				
		28		31.0		
35.0		15	S7	34.0	SILT (ML) Very dense, light bluish-gray mottled with greenish-gray, mostly silt, dry, some mica flakes; relict banding (near vertical). -SAPROLITE (MICA SCHIST)-	
		30		-		
		50/5 In.		36.0		
40.0		50/5 In.	S8	39.0	SILT (ML) Very dense, medium gray, slightly moist, mostly silt, some mica; relict bedding. -SAPROLITE (MICA SCHIST)-	
				-		
				39.5		
45.0		50/1 In.	S9	44.0	CLAYEY SILT (ML) Very dense, medium gray, wet, mostly silt, some clay, little mica; weathered rock fragments; relict bedding. -SAPROLITE (MICA SCHIST)-	
				44.1		

BLOWS/FT. DENSITY		BLOWS/FT. CONSISTENCY		SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0-4	VERY LOOSE	0-2	VERY SOFT	S SPLIT SPOON	MOSTLY 80-100%	WD - WHILE DRILLING
5-10	LOOSE	3-4	SOFT	T TUBE	SOME 30-45%	NE - NOT ENCOUNTERED
11-30	MEDIUM DENSE	5-8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15-25%	NR - NOT READ
31-50	DENSE	9-15	STIFF	G GRAB SAMPLE	FEW 5-10%	
51+	VERY DENSE	16-30	VERY STIFF	X OTHER	TRACE <5%	
		31+	HARD	NR NO RECOVERY		BORING NO. SW109



SIRRINE ENVIRONMENTAL CONSULTANTS TEST BORING REPORT

BORING NO. SW109

PAGE 3 OF 4

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS	
50.0					SILT (ML) Very dense, medium gray, moist, mostly silt, some mica; rock fragments, relict bedding. -SAPROLITE (MICA SCHIST)-	
		50/5 In.	S10	49.0 49.4		
55.0					SILT (ML) Same as above, but only slightly moist, but weathered rock more competent; dark green stained fractures of near vertical orientation visible. -SAPROLITE (MICA SCHIST)-	
		50/3 In.	S11	54.0 54.3		
60.0					SILT (ML) Very dense, medium gray, slightly moist, mostly silt, some mica; weathered rock fragments more competent; dark green stained fractures of near vertical orientation visible. -TRANSITION ZONE (MICA SCHIST)-	
		50/3 In.	S12	59.0 59.3		
65.0					SILT (ML) Very dense, medium gray, slightly moist, mostly silt, some mica; weathered rock fragments more competent; dark green stained fractures of near vertical orientation visible. -TRANSITION ZONE (MICA SCHIST)-	
		50/2 In.	S13	64.0 64.2		
70.0					SILT (ML) Very dense, medium gray, wet, mostly silt, some mica, few fine grain sand (quartz); weathered rock fragments more competent; dark green stained fractures of near vertical orientation visible. -TRANSITION ZONE (MICA SCHIST)-	
		50/1 In.	S14	69.0 69.1		
BOTTOM OF EXPLORATION AT 69.1 FEET.						
BLOWS/FT. DENSITY		BLOWS/FT. CONSISTENCY		SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPLIT SPOON	MOSTLY 50 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T TUBE	SOME 30 - 45%	NE - NOT ENCOUNTERED
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 25%	UR - NOT READ
31 - 50	DENSE	9 - 15	STIFF	G GRAB SAMPLE	FEW 5 - 10%	
51+	VERY DENSE	16 - 30	VERY STIFF	X OTHER	TRACE	
		31+	HARD	NR NO RECOVERY		
						BORING NO. SW109

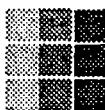


TEST BORING REPORT

BORING NO. SW109

PAGE 4 OF 4

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SIRRINE
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TEST BORING REPORT

BORING NO. PZ101

PROJECT: MEDLEY FARM R/F8 PHASE II
CLIENT: MEDLEY FARM STEERING COMMITTEE
CONTRACTOR: ATLANTA TESTING & ENGINEERING
EQUIPMENT USED: CME-550 ATV

JOB NO: G-8026
PAGE NO: 1 of 3
LOCATION: See Plan
ELEVATION: 686.04
DATE START: 8/14/90
DATE FINISH: 8/16/90
DRILLER: P. Bergman
PREPARED BY: R. Enright

GROUND WATER		DEPTH TO: (ft.)			CASING SAMPLER CORE		
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	HSA	S
8/15/90	19	49.0	-	52.0	SIZE ID	6 1/4 In.	1 3/8 In.
8/15/90	25	49.0	-	52.0	HAMMER WT		140 lbs.
8/23/90	215	48.22	59.0	61.0	HAMMER FALL		30 In.

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0					SILT (ML) Loose, pale yellowish-brown, dry, mostly silt, trace fine sand. -RESIDUAL SOIL- CLAYEY SILT (ML) Very stiff, light brown to dark yellowish-orange, dry, mostly silt, few clay, mottled. -SAPROLITE-
		5	S1	4.0	
		8		-	
		11		6.0	
		13			
10.0					CLAYEY SILT (ML) Very stiff, light brown to dark yellowish-orange, dry, mostly silt, few clay, mottled; except quartz stringer at 10.6 feet and relict foliation. -SAPROLITE-
		2	S2	9.0	
		3		-	
		5		11.0	
		4			
15.0					CLAYEY SILT (ML) Stiff, dark yellowish-orange, dry, mostly silt, few clay, mottled, relict foliation. -SAPROLITE-
		3	S3	14.0	
		4		-	
		5		16.0	
		7			
20.0					CLAYEY SILT (ML) Stiff, dark yellowish-orange, except patches of moderate red and dusty brown, dry, mostly silt, few clay, mottled, relict foliation.
		2	S4	19.0	
		3		-	

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPLIT SPOON	MOSTLY 50 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T TUBE	SOME 30 - 45%	NE - NOT ENCOUNTERED
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 25%	UR - NOT READ
31 - 50	DENSE	9 - 15	STIFF	G GRAB SAMPLE	FEW 5 - 10%	
51+	VERY DENSE	16 - 30	VERY STIFF	X OTHER	TRACE <5%	
		31+	HARD	NR NO RECOVERY		BORING NO. PZ101



TEST BORING REPORT

BORING NO. PZ101

PAGE 2 OF 3

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS			
25.0		5	S4	21.0	<p>-----</p> <p>CLAYEY SILT (ML) Very stiff, grayish to dusky yellow, dry, mostly silt, few clay, relict foliation.</p> <p>-SAPROLITE-</p>			
		6						
30.0		3	S5	24.0	<p>CLAYEY SILT (ML) Very stiff, grayish to dusky yellow, dry, mostly silt, few clay, relict foliation.</p> <p>-SAPROLITE-</p>			
		5		-				
		7						
		10		26.0				
35.0		3	S6	29.0	<p>CLAYEY SILT (ML) Very stiff, grayish to dusky yellow, dry, mostly silt, few clay, relict foliation.</p> <p>-SAPROLITE-</p>			
		6		-				
		8						
		9		31.0				
40.0		5	S7	34.0	<p>CLAYEY SILT (ML) Very stiff, grayish to dusky yellow, dry, mostly silt, few clay, relict foliation.</p> <p>-SAPROLITE-</p> <p>Note: Drilling becoming more difficult at 35.0 feet.</p>			
		7		-				
		11						
		15		36.0				
45.0		9	S8	39.0	<p>CLAYEY SILT (ML) Very stiff, grayish to dusky yellow, dry, mostly silt, few clay, relict foliation, except hard.</p> <p>-SAPROLITE-</p>			
		13		-				
		17						
		24		41.0				
45.0		43	S9	44.0	<p>-----</p> <p>CLAYEY SILT (ML) Hard, grayish to dusky yellow, moist, mostly silt, few clay, few fine sand, relict foliation.</p> <p>-SAPROLITE-</p>			
		100/3 In.		44.9				

BLOWS/FT. DENSITY		BLOWS/FT. CONSISTENCY		SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPLIT SPOON	MOSTLY 80 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T TUBE	SOME 30 - 45%	NE - NOT ENCOUNTERED
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 25%	UR - NOT READ
31 - 50	DENSE	9 - 16	STIFF	G GRAB SAMPLE	FEW 5 - 10%	
51+	VERY DENSE	16 - 30	VERY STIFF	X OTHER	TRACE <5%	
		31+	HARD	NR NO RECOVERY		BORING NO. PZ101



BORING NO. PZ101

PAGE 3 OF 3

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS			
50.0			S10	49.0 49.8	Note: Soil samples moist at 44.0 feet possibly near water table.			
		52						
		78/3.5 in						
55.0					CLAYEY SILT (ML) Hard, grayish to dusky yellow, moist, mostly silt, few fine sand, relict foliation. -SAPROLITE-			
60.0					Note: Static water level at 49.0 feet below ground surface. Due to dense material drilling is slow. No split spoons taken from 49.8 to 61.0 feet due to density of material.			
65.0					BOTTOM OF EXPLORATION AT 61.0 FEET. Note: Installed permanent 1.0 inch piezometer. PVC screen is set 44.0 to 59.0 feet with PVC riser to the surface.			
70.0								

BLOWS/FT. DENSITY		BLOWS/FT. CONSISTENCY		SAMPLE ID.		COMPONENT %		GROUND WATER ABBREV.	
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S	SPLIT SPOON	MOSTLY	50 - 100%	WD	WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T	TUBE	SOME	30 - 45%	NE	NOT ENCOUNTERED
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U	UNDISTURBED PISTON	LITTLE	15 - 25%	UR	NOT READ
31 - 50	DENSE	9 - 15	STIFF	G	GRAB SAMPLE	FEW	5 - 10%		
51+	VERY DENSE	16 - 30	VERY STIFF	X	OTHER	TRACE	<5%		
		31+	HARD	NR	NO RECOVERY			BORING NO. PZ101	

SIRRINE

ENVIRONMENTAL
CONSULTANTS

TEST BORING REPORT

BORING NO. SB1

PROJECT: MEDLEY FARM RI/FS PHASE IB

CLIENT: MEDLEY FARM STEERING COMMITTEE

CONTRACTOR: ENVIRONMENTAL DRILLING & SERVICES

EQUIPMENT USED: MOBILE DRILL B-33 ATV

JOB NO: G-8026

PAGE NO: 1 of 2

LOCATION: See Plan

ELEVATION:

DATE START: 1/9/90

DATE FINISH: 1/9/90

DRILLER: A. Davis

PREPARED BY: R. L. Burdine

GROUND WATER		DEPTH TO: (ft.)		CASING		SAMPLER		CORE BARREL	
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	HSA	S		
1/9/90	.5	NE	25.0	27.0	SIZE ID	3 1/4 in.	1 3/8 in.		
					HAMMER WT		140 lbs.		
					HAMMER FALL		30 in.		

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0		6	S1	5.0	<u>SILT (ML)</u> Medium stiff, reddish-orange, slightly moist, mostly silt, some clay, trace mica. -RESIDUAL SOIL-
		7		--	
		9		7.0	
		9			
10.0		1	S2	10.0	<u>SILT (ML)</u> Soft, tan to light reddish-brown, dry, mostly silt, few clay, trace mica. -RESIDUAL SOIL-
		2		--	
		3		12.0	
		7			
15.0		5	S3	15.0	<u>SILT (ML)</u> Soft, tan to light reddish-brown, dry, mostly silt, few clay, trace mica. -RESIDUAL SOIL-
		5		--	
		7		17.0	
		8			
20.0					

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPLIT SPOON	MOSTLY 50 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T TUBE	SOME 30 - 45%	NE - NOT ENCOUNTERED
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 25%	UR - NOT READ
31 - 50	DENSE	9 - 15	STIFF	G GRAB SAMPLE	FEW 5 - 10%	
51+	VERY DENSE	16 - 30	VERY STIFF	X OTHER	TRACE <5%	
		31+	HARD	NR NO RECOVERY		

BORING NO. SB1

SIRRINE

ENVIRONMENTAL
CONSULTANTS

TEST BORING REPORT

BORING NO. SB1

PAGE 2 OF 2

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS				
25.0		3	S4	20.0	<u>SILT (ML)</u> Loose, tan, dry, mostly silt; relict jointing stained black. -SAPROLITE-				
		6		--					
		8							
		11		22.0					
30.0		3	S5	25.0	<u>SILT (ML)</u> Loose, tan, dry, mostly silt; relict jointing stained black. -SAPROLITE-				
		8		--					
		10							
		12		27.0					
35.0					Note: Tremie grouted borehole from 27 ft. to the surface with grout / 3% Bentonite by weight mixture.				
40.0									
45.0									
BLOWS/FT. DENSITY		BLOWS/FT. CONSISTENCY		SAMPLE ID.		COMPONENT %		GROUND WATER ABBREV.	
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S	SPLIT SPOON	MOSTLY	50 - 100%	WD	WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T	TUBE	SOME	30 - 45%	NE	NOT ENCOUNTERED
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U	UNDISTURBED PISTON	LITTLE	15 - 25%	UR	NOT READ
31 - 50	DENSE	9 - 15	STIFF	G	GRAB SAMPLE	FEW	5 - 10%		
51+	VERY DENSE	16 - 30	VERY STIFF	X	OTHER	TRACE	<5%		
		31+	HARD	NR	NO RECOVERY				
BORING NO. SB1									

SIRRINE

ENVIRONMENTAL
CONSULTANTS

TEST BORING REPORT

BORING NO. SB2

PROJECT: MEDLEY FARM R/FS PHASE IB
CLIENT: MEDLEY FARM STEERING COMMITTEE
CONTRACTOR: FROEHLING & ROBERTSON, INC.
EQUIPMENT USED: CME-55 ATV

JOB NO: G-8026
PAGE NO: 1 of 2
LOCATION: See Plan
ELEVATION:
DATE START: 1/24/90
DATE FINISH: 1/24/90
DRILLER: B. Maxwell
PREPARED BY: R. L. Burdine

GROUND WATER		DEPTH TO: (ft.)			CASING		SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	HSA	S	
1/24/90	.5	NE	25.0	27.0	SIZE ID	3 1/4 in.	1 3/8 in.	
					HAMMER WT		140 lbs.	
					HAMMER FALL		30 in.	

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0					SILTY CLAY (CL) Soft to medium stiff, reddish-orange, dry, mostly clay, some silt. -RESIDUAL SOIL-
		1	S0	3.0	
		4		--	
		5			
		8		5.0	
10.0		3	S1	5.0	SILTY CLAY (CL) Soft to medium stiff, reddish-orange, dry, mostly clay, some silt, trace quartz. -RESIDUAL SOIL-
		4		--	
		6			
		7		7.0	
15.0					<hr/> SILT (ML) Loose, tan to light brown, dry, mostly silt. -SAPROLITE-
		4	S2	10.0	
		6		--	
		9			
		13		12.0	
20.0					SILT (ML) Loose, tan to light brown, dry, mostly silt. -SAPROLITE-
		8	S3	15.0	
		16		--	
		17			
		23		17.0	

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPLIT SPOON	MOSTLY 50 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T TUBE	SOME 30 - 45%	NE - NOT ENCOUNTERED
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 25%	UR - NOT READ
31 - 50	DENSE	9 - 15	STIFF	G GRAB SAMPLE	FEW 5 - 10%	
51+	VERY DENSE	16 - 30	VERY STIFF	X OTHER	TRACE <5%	
		31+	HARD	NR NO RECOVERY		BORING NO. SB2

TEST BORING REPORT

PAGE 2 OF 2

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS		
25.0		11	S4	20.0	SILT (ML) Loose, tan to light brown, dry, mostly silt. -SAPROLITE-		
		19		--			
		32					
		44		22.0			
30.0		32	S5	25.0	SILT (ML) Loose, tan to light brown, dry, mostly silt. -SAPROLITE-		
		50/5		--			
				26.0	Note: Tremie grouted borehole from 26 ft. to the surface with grout / 3% Bentonite by weight mixture.		
35.0							
40.0							
45.0							

BLOWS/FT. DENSITY		BLOWS/FT. CONSISTENCY		SAMPLE ID.		COMPONENT %	GROUND WATER ABBREV.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S	SPLIT SPOON	MOSTLY 50 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T	TUBE	SOME 30 - 45%	NE - NOT ENCOUNTERED
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U	UNDISTURBED PISTON	LITTLE 15 - 25%	UR - NOT READ
31 - 50	DENSE	9 - 15	STIFF	G	GRAB SAMPLE	FEW 5 - 10%	
51+	VERY DENSE	16 - 30	VERY STIFF	X	OTHER	TRACE <5%	
		31+	HARD	NR	NO RECOVERY		

BORING NO. SB2

SIRRINE

ENVIRONMENTAL
CONSULTANTS

TEST BORING REPORT

BORING NO. SB3

PROJECT: MEDLEY FARM RI/FS PHASE IB
CLIENT: MEDLEY FARM STEERING COMMITTEE
CONTRACTOR: FROEHLING & ROBERTSON, INC.
EQUIPMENT USED: CME-55 ATV

JOB NO: G-8026
PAGE NO: 1 of 2
LOCATION: See Plan
ELEVATION:
DATE START: 1/20/90
DATE FINISH: 1/20/90
DRILLER: B. Maxwell
PREPARED BY: R. L. Burdine

GROUND WATER		DEPTH TO: (ft.)			CASING SAMPLER CORE		
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	HSA	S
1/20/90	.5	NE	25.0	27.0	SIZE ID	3 1/4 in.	1 3/8 in.
					HAMMER WT	140 lbs.	
					HAMMER FALL	30 in.	

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0					CLAYEY SILTY (ML) Soft, dark brown to black, moist, mostly silt, some clay. -FILL-
		6	S1	5.0	
		8		--	
		9		7.0	
		11			
10.0					SILTY CLAY (CL) Stiff, reddish-orange, dry, mostly clay, little silt, trace mica. -RESIDUAL SOIL-
		4	S2	10.0	
		6		--	
		7		12.0	
		6			
15.0					
		3	S3	15.0	
		6		--	
		8		17.0	
		8			
20.0					SILT (ML) Loose, gray to tan, dry, mostly silt, few clay, trace mica flakes. -SAPROLITE-

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPLIT SPOON	MOSTLY 50 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T TUBE	SOME 30 - 45%	NE - NOT ENCOUNTERED
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 25%	UR - NOT READ
31 - 50	DENSE	9 - 15	STIFF	G GRAB SAMPLE	FEW 5 - 10%	
51+	VERY DENSE	16 - 30	VERY STIFF	X OTHER	TRACE <5%	
		31+	HARD	NR NO RECOVERY		

BORING NO. SB3

ENVIRONMENTAL CONSULTANTS

BORING NO. SB3

PAGE 2 OF 2

[illegible]

BORING NO. SB4

JOB NO: G-8026
PAGE NO: 1 of 2
LOCATION: See Plan

ELEVATION:	
DATE START:	1/20/90
DATE FINISH:	1/20/90
DRILLER:	B. Maxwell
PREPARED BY:	R. L. Burdine

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS		
5.0			S1	5.0	<u>SILTY CLAY (CL)</u> Stiff, reddish-orange, dry, mostly clay, some silt, trace mica flakes. -RESIDUAL SOIL-		
10.0		9	S2	--			
		11					
		11					
		13					
15.0		4	S3	10.0			
		5					
		6					
		6					
20.0		5		15.0			
		6					
		7					
		7					
BLOWS/FT. DENSITY		BLOWS/FT. CONSISTENCY		SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.	
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPLIT SPOON	MOSTLY 50 - 100%	WD - WHILE DRILLING NE - NOT ENCOUNTERED UR - NOT READ	
5 - 10	LOOSE	3 - 4	SOFT	T TUBE	SOME 30 - 45%		
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 25%		
31 - 50	DENSE	9 - 15	STIFF	G GRAB SAMPLE	FEW 5 - 10%		
51+	VERY DENSE	16 - 30	VERY STIFF	X OTHER	TRACE <5%		
		31+	HARD	NR NO RECOVERY			
BORING NO. SB4							

TEST BORING REPORT

PAGE 2 OF 2

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS		
25.0		4	S4	20.0	<u>CLAYEY SILT (ML)</u> Loose, tan to reddish-orange to red, dry, mostly silt, little clay, trace mica flakes. -SAPROLITE-		
		4					
		7					
		8					
25.0		6	S5	25.0	<u>CLAYEY SILT (ML)</u> Loose, tan to reddish-orange to red, dry, mostly silt, little clay, trace mica flakes. -SAPROLITE-		
		7					
		8					
		10					
30.0					Bottom of Exploration at 27.0 ft. Note: Tremie grouted borehole from 27 ft. to the surface with grout / 3% bentonite by weight mixture.		
35.0							
40.0							
45.0							

BLOWS/FT. DENSITY		BLOWS/FT. CONSISTENCY		SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPLIT SPOON	MOSTLY 50 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T TUBE	SOME 30 - 45%	NE - NOT ENCOUNTERED
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 25%	UR - NOT READ
31 - 50	DENSE	9 - 15	STIFF	G GRAB SAMPLE	FEW 5 - 10%	
51+	VERY DENSE	16 - 30	VERY STIFF	X OTHER	TRACE <5%	
		31+	HARD	NR NO RECOVERY		

BORING NO. SB4

SIRRINE

ENVIRONMENTAL
CONSULTANTS

TEST BORING REPORT

BORING NO. SB5

PROJECT: MEDLEY FARM R/F/S PHASE 1B
CLIENT: MEDLEY FARM STEERING COMMITTEE
CONTRACTOR: FROEHLING & ROBERTSON, INC.
EQUIPMENT USED: CME-55 ATV

JOB NO: G-8026
PAGE NO: 1 of 2
LOCATION: See Plan
ELEVATION:
DATE START: 1/24/90
DATE FINISH: 1/24/90
DRILLER: B. Maxwell
PREPARED BY: R. L. Burdine

GROUND WATER		DEPTH TO: (ft.)		CASING		SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	HSA	S
1/24/90	.5	NE	25.0	27.0	SIZE ID	3 1/4 in.	1 3/8 in.
					HAMMER WT	140 lbs.	
					HAMMER FALL	30 in.	

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE
5.0				
		5	S0	2.0
		7		--
		9		4.0
		11		
10.0		4	S1	5.0
		5		--
		6		7.0
		6		
15.0		6	S2	10.0
		50/5		--
				11.0
20.0		6	S3	15.0
		19		--
		13		17.0
		14		

FIELD CLASSIFICATION AND REMARKS

Note: Soil is stained purple to 6 inches below surface.

SILTY CLAY / CLAYEY SILT (CL/ML)

Medium stiff to stiff, reddish-orange, dry, mostly silt/clay, trace mica flakes.

-RESIDUAL SOIL-

CLAYEY SILT (ML)

Soft to medium stiff, reddish-orange to reddish brown, dry, mostly silt, little clay, trace mica flakes.

-SAPROLITE-

SILT (ML)

Loose to dense, gray to light brown, dry, mostly silt, trace rock (schist) gravel, few mica flakes.

-SAPROLITE-

SILT (ML)

Loose to dense, gray to light brown, dry, mostly silt, trace rock (schist) gravel, few mica flakes.

-SAPROLITE-

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPLIT SPOON	MOSTLY 50 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T TUBE	SOME 30 - 45%	NE - NOT ENCOUNTERED
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 25%	UR - NOT READ
31 - 50	DENSE	9 - 15	STIFF	G GRAB SAMPLE	FEW 5 - 10%	
51+	VERY DENSE	16 - 30	VERY STIFF	X OTHER	TRACE <5%	
		31+	HARD	NR NO RECOVERY		BORING NO. SB5

TEST BORING REPORT

PAGE 2 OF 2

BORING NO. SB5

BORING NO. SB6

PREPARED BY: R. L. Burdine

-SAPROLITE-

BORING NO. SB6

SIRRINE

ENVIRONMENTAL
CONSULTANTS

TEST BORING REPORT

BORING NO. SB6

PAGE 2 OF 2

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
25.0		3	S4	20.0	CLAYEY SILT (ML) Loose, tan to reddish-orange to red, dry, mostly silt, little clay, trace mica flakes. -SAPROLITE-
		6			
		8			
		10			
25.0		4	S5	25.0	CLAYEY SILT (ML) Loose, tan to reddish-orange to red, dry, mostly silt, little clay, trace mica flakes. -SAPROLITE-
		8			
		10			
		11			
30.0					Bottom of Exploration at 27.0 ft. Note: Tremie grouted borehole from 27 ft. to the surface with grout / 3% bentonite by weight mixture.
35.0					
40.0					
45.0					

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPLIT SPOON	MOSTLY 50 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T TUBE	SOME 30 - 45%	NE - NOT ENCOUNTERED
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 25%	UR - NOT READ
31 - 50	DENSE	9 - 15	STIFF	G GRAB SAMPLE	FEW 5 - 10%	
51+	VERY DENSE	16 - 30	VERY STIFF	X OTHER	TRACE <5%	
		31+	HARD	NR NO RECOVERY		

BORING NO. SB6

SIRRINE

ENVIRONMENTAL
CONSULTANTS

TEST BORING REPORT

BORING NO. SB7

PROJECT: MEDLEY FARM RI/FS PHASE IB
CLIENT: MEDLEY FARM STEERING COMMITTEE
CONTRACTOR: FROEHLING & ROBERTSON, INC.
EQUIPMENT USED: CME-55 ATV

JOB NO: G-8026
PAGE NO: 1 of 2
LOCATION: See Plan
ELEVATION:
DATE START: 1/19/90
DATE FINISH: 1/19/90
DRILLER: B. Maxwell
PREPARED BY: R. L. Burdine

GROUND WATER		DEPTH TO: (ft.)			CASING SAMPLER CORE		
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	HSA	S
1/19/90	.5	NE	25.0	27.0	SIZE ID	3 1/4 in.	1 3/8 in.
					HAMMER WT	140 lbs.	
					HAMMER FALL	30 in.	

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0		6	S1	5.0	<u>SILTY CLAY (CL)</u> Medium stiff, orangish-red, dry, mostly clay, little silt, trace quartz gravel. -RESIDUAL SOIL-
		6		--	
		7		7.0	
		6			
10.0		4	S2	10.0	<u>CLAYEY SILT (ML)</u> Loose, orange-red-tan, dry, mostly silt, little clay, trace mica flakes. -SAPROLITE-
		4		--	
		6		12.0	
		7			
15.0		4	S3	15.0	<u>SILT (ML)</u> Loose, tan, dry, mostly silt, trace mica flakes. -SAPROLITE-
		6		--	
		9		17.0	
		9			
20.0					

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPLIT SPOON	MOSTLY 50 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T TUBE	SOME 30 - 45%	NE - NOT ENCOUNTERED
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 25%	UR - NOT READ
31 - 50	DENSE	9 - 15	STIFF	G GRAB SAMPLE	FEW 5 - 10%	
51+	VERY DENSE	16 - 30	VERY STIFF	X OTHER	TRACE <5%	
		31+	HARD	NR NO RECOVERY		BORING NO. SB7

**ENVIRONMENTAL
CONSULTANTS**

TEST BORING REPORT

PAGE 2 OF 2

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS		
		5	S4	20.0	<u>SILT (ML)</u> Loose, tan, dry, mostly silt, trace mica flakes. <div>-SAPROLITE-</div>		
		6		--			
		8					
		9		22.0			
25.0			S5		<u>SILT (ML)</u> Loose, gray, dry, mostly silt, trace mica flakes. <div>-SAPROLITE-</div>		
		7		25.0			
		10		--			
		12		27.0			
30.0		10			Bottom of Exploration at 27.0 ft. <div>Note: Tremie grouted borehole from 27 ft. to the surface with grout / 3% bentonite by weight mixture.</div>		
35.0							
40.0							
45.0							

BLOWS/FT. DENSITY		BLOWS/FT. CONSISTENCY		SAMPLE ID.	COMPONENT %	GROUND WATER ABBREVIATION
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPLIT SPOON	MOSTLY 50 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T TUBE	SOME 30 - 45%	NE - NOT ENCOUNTERED
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 25%	UR - NOT READ
31 - 50	DENSE	9 - 15	STIFF	G GRAB SAMPLE	FEW 5 - 10%	
51+	VERY DENSE	16 - 30	VERY STIFF	X OTHER	TRACE <5%	
		31+	HARD	NR NO RECOVERY		

BORING NO. SB7

SIRRINE

ENVIRONMENTAL
CONSULTANTS

TEST BORING REPORT

BORING NO. SB8

PROJECT: MEDLEY FARM R/VFS PHASE IB

CLIENT: MEDLEY FARM STEERING COMMITTEE

CONTRACTOR: FROEHLING & ROBERTSON, INC.

EQUIPMENT USED: CME-55 ATV

JOB NO: G-8026

PAGE NO: 1 of 2

LOCATION: See Plan

ELEVATION:

DATE START: 1/18/90

DATE FINISH: 1/18/90

DRILLER: B. Maxwell

PREPARED BY: R. L. Burdine

GROUND WATER		DEPTH TO: (ft.)			CASING SAMPLER CORE		
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	HSA	S
1/18/90	.5	NE	25.0	27.0	SIZE ID	3 1/4 in.	1 3/8 in.
					HAMMER WT	140 lbs.	
					HAMMER FALL	30 in.	

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0		18 33 50/4	S1	5.0 -- 6.5	<u>SANDY SILT (ML)</u> Medium dense to very dense, gray to tan, dry, mostly silt, some fine sand, trace mica flakes. -SAPROLITE-
10.0		50/5.5	S2	10.0 10.5	<u>SANDY SILT (ML)</u> Medium dense to very dense, gray to tan, dry, mostly silt, some fine sand, trace mica flakes. -SAPROLITE-
15.0		27 50/5	S3	15.0 16.0	<u>SANDY SILT (ML)</u> Medium dense to very dense, gray to tan, dry, mostly silt, some fine sand, trace mica flakes. -SAPROLITE-
20.0					

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPLIT SPOON	MOSTLY 50 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T TUBE	SOME 30 - 45%	NE - NOT ENCOUNTERED
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 25%	UR - NOT READ
31 - 50	DENSE	9 - 15	STIFF	G GRAB SAMPLE	FEW 5 - 10%	
51+	VERY DENSE	16 - 30	VERY STIFF	X OTHER	TRACE <5%	
		31+	HARD	NR NO RECOVERY		

BORING NO. SB8

ENVIRONMENTAL CONSULTANTS

BORING NO. SB8

PAGE 2 OF 2

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS		
25.0		37	S4	20.0	SANDY SILT (ML) Medium dense to very dense, gray to tan, dry, mostly silt, some fine sand, trace mica flakes. -SAPROLITE-		
		50/3		21.0			
					SANDY SILT (ML) Medium dense to very dense, gray to tan, dry, mostly silt, some fine sand, trace mica flakes. -SAPROLITE-		
				Bottom of Exploration at 25.0 ft.			
	50/5	S5	25.0 25.5				
30.0					Note: Tremie grouted borehole from 25 ft. to the surface with grout / 3% bentonite by weight mixture.		
					Bottom of Exploration at 25.0 ft.		
35.0					Bottom of Exploration at 25.0 ft.		
40.0					Bottom of Exploration at 25.0 ft.		
45.0					Bottom of Exploration at 25.0 ft.		
BLOWS/FT. DENSITY		BLOWS/FT. CONSISTENCY		SAMPLE ID.		COMPONENT %	GROUND WATER ABBREV.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S	SPLIT SPOON	MOSTLY 50 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T	TUBE	SOME 30 - 45%	NE - NOT ENCOUNTERED
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U	UNDISTURBED PISTON	LITTLE 15 - 25%	UR - NOT READ
31 - 50	DENSE	9 - 15	STIFF	G	GRAB SAMPLE	FEW 5 - 10%	
51+	VERY DENSE	16 - 30	VERY STIFF	X	OTHER	TRACE <5%	
		31+	HARD	NR	NO RECOVERY		
							BORING NO. SB8

SIRRINE

ENVIRONMENTAL
CONSULTANTS

TEST BORING REPORT

BORING NO. SB9

PROJECT: MEDLEY FARM RI/FS PHASE IB

CLIENT: MEDLEY FARM STEERING COMMITTEE

CONTRACTOR: FROEHLING & ROBERTSON, INC.

EQUIPMENT USED: CME-55 ATV

JOB NO: G-8026

PAGE NO: 1 of 2

LOCATION: See Plan

ELEVATION:

DATE START: 1/20/90

DATE FINISH: 1/20/90

DRILLER: B. Maxwell

PREPARED BY: R. L. Burdine

GROUND WATER		DEPTH TO: (ft.)			CASING		SAMPLER	CORE
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	HSA	S	BARREL
1/20/90	.5	NE	25.0	27.0	SIZE ID	3 1/4 in.	1 3/8 in.	
					HAMMER WT		140 lbs.	
					HAMMER FALL		30 in.	

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0		3	S1	5.0	<u>SILTY CLAY (CL)</u> Medium stiff, reddish-orange and tan, dry, mostly clay, some silt. -RESIDUAL SOIL-
		5		--	
		6		7.0	
		9			
10.0		5	S2	10.0	<u>CLAYEY SILT (ML)</u> Loose, tan and gray, dry, mostly silt, some clay, trace mica. -SAPROLITE-
		8		--	
		11		12.0	
		13			
15.0		4	S3	15.0	<u>SILT (ML)</u> Loose to medium dense, gray to light brown, mostly silt, few clay, few mica. -SAPROLITE (Schist)-
		8		--	
		14		17.0	
		15			
20.0					

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPLIT SPOON	MOSTLY 50 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T TUBE	SOME 30 - 45%	NE - NOT ENCOUNTERED
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 25%	UR - NOT READ
31 - 50	DENSE	9 - 15	STIFF	G GRAB SAMPLE	FEW 5 - 10%	
51+	VERY DENSE	16 - 30	VERY STIFF	X OTHER	TRACE <5%	
		31+	HARD	NR NO RECOVERY		

BORING NO. SB9

TEST BORING REPORT

PAGE 2 OF 2

[illegible]

SIRRINE

ENVIRONMENTAL
CONSULTANTS

TEST BORING REPORT

BORING NO. SB10

PROJECT: MEDLEY FARM R/F/S PHASE IB
CLIENT: MEDLEY FARM STEERING COMMITTEE
CONTRACTOR: FROEHLING & ROBERTSON, INC.
EQUIPMENT USED: CME-55 ATV

JOB NO: G-8026
PAGE NO: 1 of 2
LOCATION: See Plan
ELEVATION:
DATE START: 1/18/90
DATE FINISH: 1/18/90
DRILLER: B. Maxwell
PREPARED BY: R. L. Burdine

GROUND WATER		DEPTH TO: (ft.)			CASING SAMPLER CORE		
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	HSA	S
1/18/90	.5	NE	25.0	27.0	SIZE 10	3 1/4 in.	1 3/8 in.
					HAMMER WT	140 lbs.	
					HAMMER FALL	30 in.	

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0					
		5	S1	5.0	<u>SILTY CLAY (CL)</u> Stiff, orangish-red, dry, mostly clay, some silt.
		9		--	
		13			
		16		7.0	
10.0					
		4	S2	10.0	<u>SILT (ML)</u> Loose, tan, dry, mostly silt, trace fine sand.
		5		--	
		6			
		9		12.0	
15.0					
		5	S3	15.0	<u>SILT (ML)</u> Loose, tan, dry, mostly silt, trace fine sand.
		6		--	
		7			
		7		17.0	
20.0					

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPUT SPOON	MOSTLY 50 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T TUBE	SOME 30 - 45%	NE - NOT ENCOUNTERED
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 25%	UR - NOT READ
31 - 50	DENSE	9 - 15	STIFF	G GRAB SAMPLE	FEW 5 - 10%	
51+	VERY DENSE	16 - 30	VERY STIFF	X OTHER	TRACE <5%	
		31+	HARD	NR NO RECOVERY		

BORING NO. SB10

TEST BORING REPORT

BORING NO. SB10

PAGE 2 OF 2

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS		
		5	S4	20.0	<u>SILT (ML)</u> Loose, tan, dry, mostly silt, little quartz gravel and coarse sand, trace fine sand. -SAPROLITE-		
		10					
		15					
		13		22.0			
25.0			S5		<u>SILT (ML)</u> Loose, tan, dry, mostly silt, little quartz gravel and coarse sand, trace fine sand. -SAPROLITE-		
		18		25.0	Bottom of Exploration at 27.0 ft.		
		22					
		21					
		30		27.0			
30.0					Note: Tremie grouted borehole from 27 ft. to the surface with grout / 3% bentonite by weight mixture.		
35.0							
40.0							
45.0							
BLOWS/FT. DENSITY		BLOWS/FT. CONSISTENCY		SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.	
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPLIT SPOON	MOSTLY 50 - 100%	WD - WHILE DRILLING	
5 - 10	LOOSE	3 - 4	SOFT	T TUBE	SOME 30 - 45%	NE - NOT ENCOUNTERED	
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 25%	UR - NOT READ	
31 - 50	DENSE	9 - 15	STIFF	G GRAB SAMPLE	FEW 5 - 10%		
51+	VERY DENSE	16 - 30	VERY STIFF	X OTHER	TRACE <5%		
		31+	HARD	NR NO RECOVERY		BORING NO. SB10	

SIRRINE

ENVIRONMENTAL
CONSULTANTS

TEST BORING REPORT

BORING NO. BW1

PROJECT: MEDLEY FARM RI/FS

CLIENT: MEDLEY FARM STEERING COMMITTEE

CONTRACTOR: ENVIRONMENTAL DRILLING & SERVICES

EQUIPMENT USED: MOBILE DRILL B-57

JOB NO: G-8026

PAGE NO: 1 of 5

LOCATION: See Plan

ELEVATION: 688.65

DATE START: 6/1/89

DATE FINISH: 6/14/89

DRILLER: D. G. Fitzpatrick

PREPARED BY: R. L. Burdine

GROUND WATER		DEPTH TO: (ft.)			CASING SAMPLER CORE		
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	HSA	S
6/5/89	.5	54.4	60.5	60.5	SIZE ID	3 1/4 in.	1 3/8 in.
6/6/89	14	55.75	65.0	65.0	HAMMER WT	140 lbs.	
					HAMMER FALL	30 in.	

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0		3	S1	5.0	<u>CLAYEY SILT (ML)</u> Soft, reddish-brown, dry, mostly silt, some clay, trace fine sand.
		4		-	
		5			
		7		7.0	
10.0		2	S2	10.0	<u>SILT (ML)</u> Soft, tan, dry, mostly silt.
		2		-	
		3			
		4		12.0	
15.0		6	S3	15.0	<u>SILT (ML)</u> Soft, tan, dry, mostly silt, trace mica.
		7		-	
		7			
		7		17.0	
20.0					

-RESIDUAL SOIL-

-SAPROLITE-

-SAPROLITE-

Note: Drilling is Intermittently hard and soft.

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPLIT SPOON	MOSTLY 50 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T TUBE	SOME 30 - 45%	NE - NOT ENCOUNTERED
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 25%	UR - NOT READ
31 - 50	DENSE	9 - 15	STIFF	G GRAB SAMPLE	FEW 5 - 10%	
51+	VERY DENSE	16 - 30	VERY STIFF	X OTHER	TRACE <5%	
		31+	HARD	NR NO RECOVERY		

BORING NO. BW1

TEST BORING REPORT

PAGE 2 OF 5

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
20.0		4	S4	20.0	<u>SILT (ML)</u> Loose to medium dense, tan, dry, mostly silt, trace fine sand. -SAPROLITE- Note: Drilling became very difficult. Using 3000 psi down pressure it is taking more than 10 minutes per foot.
		8		-	
		10			
		12		22.0	
25.0			S5		<u>SILT (ML)</u> Loose to medium dense, tan, dry, mostly silt, trace fine sand, with trace quartz gravel. -SAPROLITE-
		7		25.0	
		11		-	
		14			
30.0		10	S6	30.0	<u>SILT (ML)</u> Loose to medium dense, tan, dry, mostly silt, trace fine sand, with trace thin quartz veins at various angles. -SAPROLITE-
		12		--	
		17			
		17		32.0	
35.0		18	S7	33.0	<u>SILT (ML)</u> Loose to medium dense, tan, dry, mostly silt, trace fine sand, with trace thin quartz veins at various angles. -SAPROLITE-
		20		--	
		24			
		50/5 in.		35.0	
40.0		20	S8	35.0	<u>SILT (ML)</u> Loose to medium dense, tan, dry, mostly silt, trace fine sand, with trace thin quartz veins at various angles. -SAPROLITE- Note: Extremely hard material and drilling is very difficult.
		45		-	
		50/4		36.5	
45.0		24	S9	40.0	<u>SILT (ML)</u> Dense, tan and gray, dry, mostly silt, trace fine sand. -SAPROLITE-
		45		-	
		40			
		50/5 in.		42.0	

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPLIT SPOON	MOSTLY 50 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T TUBE	SOME 30 - 45%	NE - NOT ENCOUNTERED
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 25%	UR - NOT READ
31 - 50	DENSE	9 - 15	STIFF	G GRAB SAMPLE	FEW 5 - 10%	
51+	VERY DENSE	16 - 30	VERY STIFF	X OTHER	TRACE <5%	
		31+	HARD	NR NO RECOVERY		

BORING NO. BW1

SIRRINE

ENVIRONMENTAL
CONSULTANTS

TEST BORING REPORT

BORING NO. BW1

PAGE 3 OF 5

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS	
45.0		24	S10	45.0	<u>POORLY GRADED SAND WITH SILT (SP-SM)</u> Dense gray and tan, dry, mostly fine sand, few silt.	
		50		46.0		
					-SAPROLITE-	
50.0		15	S11	50.0	<u>CLAYEY SILT WITH SAND (ML)</u> Medium dense, gray to tan, mostly silt, little clay, trace fine sand trace mica.	
		15		-		
		25				
		40		52.0		
55.0		18	S12	55.0	<u>CLAYEY SILT WITH SAND (ML)</u> Medium dense, gray to tan, mostly silt, little clay, trace fine sand trace mica.	
		34		-		
		38				
		50		57.0		
60.0		24	S13	60.0	<u>CLAYEY SILT WITH SAND (ML)</u> Medium dense, gray to tan, mostly silt, little clay, trace fine sand trace mica.	
		50/5 in.		61.0		
65.0		6	S14	65.0	<u>CLAYEY SILT WITH SAND (ML)</u> Medium dense, gray to tan, mostly silt, little clay, trace fine sand, trace mica.	
		50/4.5		66.0		
70.0						
BLOWS/FT. DENSITY		BLOWS/FT. CONSISTENCY		SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPLIT SPOON	MOSTLY 50 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T TUBE	SOME 30 - 45%	NE - NOT ENCOUNTERED
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 25%	UR - NOT READ
31 - 50	DENSE	9 - 15	STIFF	G GRAB SAMPLE	FEW 5 - 10%	
51+	VERY DENSE	16 - 30	VERY STIFF	X OTHER	TRACE <5%	
		31+	HARD	NR NO RECOVERY		BORING NO. BW1

ENVIRONMENTAL CONSULTANTS

BORING NO. BW1

PAGE 4 OF 5

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS		
70.0		50/5 In.	S15	70.0 -- 70.5	<u>POORLY GRADED SAND (SP)</u> Very dense, gray to tan, moist, mostly fine to medium sand, little mica, few biotite. -SAPROLITE-		
75.0		50/5 In.	S16	75.0 -- 75.5	<u>POORLY GRADED SAND (SP)</u> Very dense, gray to tan, moist, mostly fine to medium sand, little mica, few biotite. -SAPROLITE-		
80.0					Auger Refusal at 80.5 feet		
85.0					Note: Removed augers from borehole and set up to begin reaming the borehole with a 10 inch tri-cone roller bit. Tried to ream with water but had to switch to bentonite mud rotary. Reamed borehole to 85.7 ft. creating a 5 ft. socket in competent bedrock. Installed stainless steel solid casing from 85.7 to 45.7 ft. and solid PVC casing from 45.7 ft. to the surface. The casing was pressure grouted in place with 3% bentonite/cement grout.		
90.0							
95.0							
BLOWS/FT. DENSITY		BLOWS/FT. CONSISTENCY		SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.	
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPLIT SPOON	MOSTLY 50 - 100%	WD - WHILE DRILLING	
5 - 10	LOOSE	3 - 4	SOFT	T TUBE	SOME 30 - 45%	NE - NOT ENCOUNTERED	
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 25%	UR - NOT READ	
31 - 50	DENSE	9 - 15	STIFF	G GRAB SAMPLE	FEW 5 - 10%		
51+	VERY DENSE	16 - 30	VERY STIFF	X OTHER	TRACE <5%		
		31+	HARD	NR NO RECOVERY		BORING NO. BW1	

ENVIRONMENTAL CONSULTANTS

BORING NO. BW1

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[illegible]

SIRRINE

ENVIRONMENTAL
CONSULTANTS

TEST BORING REPORT

BORING NO. BW2

PROJECT: MEDLEY FARM R/F/S

CLIENT: MEDLEY FARM STEERING COMMITTEE

CONTRACTOR: ENVIRONMENTAL DRILLING & SERVICES

EQUIPMENT USED: MOBILE DRILL B-57

JOB NO: G-8026

PAGE NO: 1 of 4

LOCATION: See Plan

ELEVATION: 661.26

DATE START: 7/25/89

DATE FINISH: 7/25/89

DRILLER: D. G. Fitzpatrick

PREPARED BY: R. J. Hunt

GROUND WATER		DEPTH TO: (ft.)			CASING		SAMPLER	CORE
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	HSA	S	BARREL
7/25	WD	NE	-	65.0	SIZE ID	6 3/4 In.	1 3/8 In.	
					HAMMER WT		140 lbs.	
					HAMMER FALL		30 in.	

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0					
		4		4.0	
		5	S1	-	
10.0		6		6.0	
		7			
		4		9.0	
		4	S2	-	
15.0		4		11.0	
		5			
		3		14.0	
		3	S3	-	
20.0		4		16.0	
		5			
		2		19.0	
		3	S4	-	
		3			

SILTY CLAY (CL)

Medium stiff, reddish-orange, dry, mostly clay, little silt, trace muscovite.

-RESIDUAL SOIL-

SILT (ML)

Soft, reddish tan, dry, mostly silt, trace sand, trace muscovite.

-SAPROLITE-

SILT WITH SAND (ML)

Soft, reddish tan, dry, mostly silt, little fine sand, trace clay, trace muscovite.

-SAPROLITE-

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPLIT SPOON	MOSTLY 50 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T TUBE	SOME 30 - 45%	NE - NOT ENCOUNTERED
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 25%	UR - NOT READ
31 - 50	DENSE	9 - 15	STIFF	G GRAB SAMPLE	FEW 5 - 10%	
51+	VERY DENSE	16 - 30	VERY STIFF	X OTHER	TRACE <5%	
		31+	HARD	NR NO RECOVERY		

BORING NO. BW2

SIRRINE

ENVIRONMENTAL
CONSULTANTS

TEST BORING REPORT

BORING NO. BW2

PAGE 2 OF 4

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS	
20.0		3	S4	--	<u>SILT WITH SAND (ML)</u> Soft, reddish tan, dry, mostly silt, little fine sand, trace clay, trace muscovite. -SAPROLITE-	
		4		21.0		
25.0		3	S5	24.0	<u>SILT WITH SAND (ML)</u> Soft, reddish tan, dry, mostly silt, little fine sand, trace clay, trace muscovite. -SAPROLITE-	
		4		--		
		6		26.0		
		8				
30.0		3	S6	29.0	<u>SILT WITH SAND (ML)</u> Soft, reddish tan, dry, mostly silt, little fine sand, trace clay, trace muscovite. -SAPROLITE-	
		4		--		
		6		31.0		
		7				
35.0		3	S7	34.0	<u>SILT WITH SAND (ML)</u> Medium stiff, tannish gray, mostly silt, little fine sand, trace to few muscovite, trace clay, weakly foliated (schistose). -SAPROLITE-	
		5		--		
		7		36.0		
		9				
40.0		3	S8	39.0	<u>SILT WITH SAND (ML)</u> Medium stiff, tannish gray, mostly silt, little fine sand, trace to few muscovite, trace clay, weakly foliated (schistose). -SAPROLITE-	
		5		--		
		8		41.0		
		8				
45.0		4	S9	44.0	<u>SILT WITH SAND (ML)</u> Medium stiff, tannish gray, mostly silt, little fine sand, trace to few muscovite, trace clay, weakly foliated (schistose). -SAPROLITE-	
		8		--		
		9				
	BLOWS/FT. DENSITY		BLOWS/FT. CONSISTENCY			SAMPLE ID.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPLIT SPOON	MOSTLY 50 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T TUBE	SOME 30 - 45%	NE - NOT ENCOUNTERED
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 25%	UR - NOT READ
31 - 50	DENSE	9 - 15	STIFF	G GRAB SAMPLE	FEW 5 - 10%	
51+	VERY DENSE	16 - 30	VERY STIFF	X OTHER	TRACE <5%	
		31+	HARD	NR NO RECOVERY		BORING NO. BW2

ENVIRONMENTAL CONSULTANTS

BORING NO. BW2

PAGE 3 OF 4

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
45.0		9	S9	--	<p>SILT WITH SAND (ML) Medium stiff, tannish gray, mostly silt, little fine sand, trace to few muscovite, trace clay, foliation is more defined (schistose).</p> <p>- SAPROLITE -</p>
		10		46.0	
50.0		5	S10	49.0	<p>SILT WITH SAND (ML) Medium stiff, tannish gray, mostly silt, little fine sand, trace to few muscovite, trace clay, foliation is more defined (schistose).</p> <p>- SAPROLITE -</p>
		9		--	
		15			
		19		51.0	
55.0		12	S11	54.0	<p>SILT WITH SAND (ML) Medium stiff, tannish gray, mostly silt, little fine sand, trace to few muscovite, trace clay, foliation is more defined (schistose).</p> <p>- SAPROLITE -</p>
		17		--	
		15			
		50/4.5		56.0	
60.0		50/5 in.	S12	59.0 59.5	<p>Auger Refusal at 60.0 ft.</p> <p>Note: Removed augers from borehole and set up to begin reaming the borehole with a 10 inch tri-cone roller bit. Reamed borehole to 65.0 ft. creating a 5 ft. socket in competent bedrock. Installed stainless steel solid casing from 54.4 ft. to 64.4 ft. and solid PVC casing from 54.4 ft. to the surface. The casing was pressure grouted in place with 3% bentonite/cement grout</p>
65.0					<p>Auger Refusal at 60.0 ft.</p> <p>Note: Removed augers from borehole and set up to begin reaming the borehole with a 10 inch tri-cone roller bit. Reamed borehole to 65.0 ft. creating a 5 ft. socket in competent bedrock. Installed stainless steel solid casing from 54.4 ft. to 64.4 ft. and solid PVC casing from 54.4 ft. to the surface. The casing was pressure grouted in place with 3% bentonite/cement grout</p>
70.0					<p>Auger Refusal at 60.0 ft.</p> <p>Note: Removed augers from borehole and set up to begin reaming the borehole with a 10 inch tri-cone roller bit. Reamed borehole to 65.0 ft. creating a 5 ft. socket in competent bedrock. Installed stainless steel solid casing from 54.4 ft. to 64.4 ft. and solid PVC casing from 54.4 ft. to the surface. The casing was pressure grouted in place with 3% bentonite/cement grout</p>

BLOWS/FT. DENSITY		BLOWS/FT. CONSISTENCY		SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPLIT SPOON	MOSTLY 50 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T TUBE	SOME 30 - 45%	NE - NOT ENCOUNTERED
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 25%	UR - NOT READ
31 - 50	DENSE	9 - 15	STIFF	G GRAB SAMPLE	FEW 5 - 10%	
51+	VERY DENSE	16 - 30	VERY STIFF	X OTHER	TRACE <5%	
		31+	HARD	NR NO RECOVERY		
						BORING NO. BW2

ENVIRONMENTAL CONSULTANTS

BORING NO BW2

PAGE 4 OF 4

CONSOLIDATED								
DEPTH IN FEET	DRILL RATE MIN. PER FOOT	CORE NO. DEPTH RANGE	RECOVERY		ROD	FIELD CLASSIFICATION AND REMARKS		
			FT.	%				
						65.0		
65	9:00	65.0				(Continued from Test Boring Report)		
	5:00							
	7:00	C1	2.4 5.0	48%				
	10:00							
	11:00	70.0						
70	11:30	70.0				Medium hard, moderately severely weathered, olive gray and brown (oxidized), medium-grained SCHISTOSE GNEISS, very closely spaced (2 to 4 inches), predominantly moderately dipping to steep, rough, open joints; very thin, steep foliation; joint surfaces generally heavily oxidized, except quartz nodules present.		
	12:00							
	6:00	C2	4.1 5.0	82%				
	10:00							
	12:00	75.0						
75	31:00	75.0				Medium hard, moderately severely weathered, olive gray and brown (oxidized), medium-grained SCHISTOSE GNEISS, very closely spaced (2 to 4 inches), predominantly moderately dipping to steep, rough, open joints; very thin, steep foliation; joint surfaces generally heavily oxidized, except quartz and pyrite present.		
	13:00							
	16:00	C3	3.6 5.0	73%				
	10:00							
	14:00	80.0						
80	24:00	80.0				Medium hard, moderately severely weathered, olive gray and brown (oxidized), medium-grained SCHISTOSE GNEISS, very closely spaced (2 to 4 inches), predominantly moderately dipping to steep, rough, open joints; very thin, steep foliation; joint surfaces generally heavily oxidized, except quartz and pyrite present.		
	12:00							
	19:00	C4	2.6 5.0	53%				
	14:00							
	12:00	85.0						
85						Bottom of Exploration at 85.0 ft.		
FIELD HARDNESS			BEDDING		DISCONTINUITIES JOINT/SHEAR/FRACTURE		WEATHERING	
V. HARD	- KNIFE CAN'T SCRATCH		V. THIN	<2"	V. CLOSE	<2"	FRESH	MOD. SEVERE
HARD	- SCRATCHES DIFFICULT		THIN	2" - 12"	CLOSE	2" - 12"	V. SLIGHT	SEVERE
MOD. HARD	- SCRATCHES EASILY		MEDIUM	12" - 36"	MOD. CLOSE	12" - 36"	SLIGHT	V. SEVERE
SOFT	- GROOVES		THICK	36" - 120"	WIDE	36" - 120"	MODERATE	COMPLETE
V. SOFT	- CARVES		V. THICK	>120"	V. WIDE	>120"	BORING NO. BW2	

SIRRINE

ENVIRONMENTAL
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TEST BORING REPORT

BORING NO. BW3

PROJECT: MEDLEY FARM RI/FS

CLIENT: MEDLEY FARM STEERING COMMITTEE

CONTRACTOR: ENVIRONMENTAL DRILLING & SERVICES

EQUIPMENT USED: MOBILE DRILL B-57

JOB NO: G-8026

PAGE NO: 1 of 3

LOCATION: See Plan

ELEVATION: 573.44

DATE START: 7/14/89

DATE FINISH: 7/21/89

DRILLER: D. G. Fitzpatrick

PREPARED BY: R. L. Burdine

GROUND WATER		DEPTH TO: (ft.)		CASING SAMPLER CORE			
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	HSA	S H
7/14/89	WD	6.4	10.0	10.0	SIZE ID	3 1/4 in.	1 3/8 in. 2 1/4 in
					HAMMER WT	140 lbs.	
					HAMMER FALL	30 in.	

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0		9	S1	5.0	<u>WELL GRADED SAND (SW)</u> Reddish-brown to blackish brown, moist, mostly fine sand to gravel, trace clay. -SAPROLITE (Schist)-
		9		--	
		5		7.0	
		4			
10.0		4	S2	10.0	<u>SILT (ML)</u> Reddish-brown to gray, moist, mostly silt, little clay, trace mica. -SAPROLITE (Mica Schlst)-
		5		--	
		11		12.0	
		12			
15.0		4	S3	15.0	<u>SILT (ML)</u> Reddish-brown to gray, moist, mostly silt, little clay, trace mica. -SAPROLITE (Mica Schist)-
		50		16.0	
20.0					

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPLIT SPOON	MOSTLY 50 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T TUBE	SOME 30 - 45%	NE - NOT ENCOUNTERED
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 25%	UR - NOT READ
31 - 50	DENSE	9 - 15	STIFF	G GRAB SAMPLE	FEW 5 - 10%	
51+	VERY DENSE	16 - 30	VERY STIFF	X OTHER	TRACE <5%	
		31+	HARD	NR NO RECOVERY		BORING NO. BW3

TEST BORING REPORT

BORING NO. BW3

PAGE 2 OF 3

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS		
20.0		4	S4	20.0 -- 21.0	<u>SILT WITH SAND (ML)</u> Brown, moist, mostly silt, little fine sand, little fine phlogopite flakes. -SAPROLITE- <u>SILT WITH SAND (ML)</u> Brown, moist, mostly silt, little fine sand, little fine phlogopite flakes. -SAPROLITE-		
		28					
		50/5 in.					
25.0		16	S5	25.0 -- 26.0			
		50					
30.0		18	S6	30.0 -- 31.0	No Recovery, just slough. <u>SILT WITH SAND (ML)</u> Brown, moist, mostly silt, little fine sand, little fine phlogopite flakes. -SAPROLITE-		
		50/5 in.					
35.0		50	S7	35.0	Auger Refusal at 35.0 ft. Note: Advanced with 10 inch tri-cone roller bit to 35.5 ft. Had roller bit refusal. Installed 4 inch stainless steel casing. Pressure grouted casing with neat cement grout and 3% bentonite by weight. Grout allowed to set up for 48 hrs. before coring.		
40.0							
45.0							
BLOWS/FT. DENSITY		BLOWS/FT. CONSISTENCY		SAMPLE ID.		COMPONENT %	GROUND WATER ABBREV.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S	SPLIT SPOON	MOSTLY 50 - 100%	WD - WHILE DRILLING NE - NOT ENCOUNTERED UR - NOT READ
5 - 10	LOOSE	3 - 4	SOFT	T	TUBE	SOME 30 - 45%	
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U	UNDISTURBED PISTON	LITTLE 15 - 25%	
31 - 50	DENSE	9 - 15	STIFF	G	GRAB SAMPLE	FEW 5 - 10%	
51+	VERY DENSE	16 - 30	VERY STIFF	X	OTHER	TRACE <5%	BORING NO. BW3
		31+	HARD	NR	NO RECOVERY		

PAGE 3 OF 3

CONSULTANTS								
DEPTH IN FEET	DRILL RATE MIN. PER FOOT	CORE NO.	RECOVERY		ROD	FIELD CLASSIFICATION AND REMARKS		
		DEPTH RANGE	FT.	%				
35						35.0	(Continued from Test Boring Report)	
	20:00	35.0					Hard, fresh, gray, fine to medium grained, QUARTZ-AMPHIBOLE GNEISS, close to moderately closely spaced (0.5 to 2.5 feet) tight, moderately dipping, rough joints; very thin, moderately dipping foliation.	
	14:40							
	13:17	C1	2.5 / 3.0	83%	73			
	19:24							
	18:20	38.0						
40	20:00	38.0					Hard, fresh, gray, fine to medium grained, QUARTZ-AMPHIBOLE GNEISS, close to moderately closely spaced (0.5 to 2.5 feet) tight, moderately dipping, rough joints; very thin, moderately dipping foliation.	
	23:50							
	25:00	C2	4.9 / 5.0	98%	95			
	17:42							
	24:00	43.0						
45	22:00	43.0					Hard, fresh, gray, fine to medium grained, QUARTZ-AMPHIBOLE GNEISS, close to moderately closely spaced (0.5 to 2.5 feet) tight, moderately dipping, rough joints; very thin, moderately dipping foliation.	
	20:00							
	20:00	C3	6.5 / 7.0	93%	93			
	20:00							
	20:00							
50	20:00	50.0					Hard, fresh, gray, fine to medium grained, QUARTZ-AMPHIBOLE GNEISS, close to moderately closely spaced (0.5 to 2.5 feet) tight, moderately dipping, rough joints; very thin, moderately dipping foliation.	
	26:00	50.0						
	20:00							
	21:00	C4	4.9 / 5.0	98%	98			
	21:00							
55	21:00	55.0					Bottom of Exploration at 55.0 ft.	
FIELD HARDNESS			BEDDING		DISCONTINUITIES JOINT/SHEAR/FRACTURE		WEATHERING	
V. HARD	- KNIFE CAN'T SCRATCH		V. THIN	<2"	V. CLOSE	<2"	FRESH	MOD. SEVERE
HARD	- SCRATCHES DIFFICULT		THIN	2" - 12"	CLOSE	2" - 12"	V. SLIGHT	SEVERE
MOD. HARD	- SCRATCHES EASILY		MEDIUM	12" - 36"	MOD. CLOSE	12" - 36"	SLIGHT	V. SEVERE
SOFT	- GROOVES		THICK	36" - 120"	WIDE	36" - 120"	MODERATE	COMPLETE
V. SOFT	- CARVES		V. THICK	>120"	V. WIDE	>120"	BORING NO. BW3	

SIRRINE

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TEST BORING REPORT

BORING NO. BW4

PROJECT: MEDLEY FARM R/F/S

CLIENT: MEDLEY FARM STEERING COMMITTEE

CONTRACTOR: ENVIRONMENTAL DRILLING & SERVICES

EQUIPMENT USED: MOBILE DRILL B-57

JOB NO: G-8026

PAGE NO: 1 of 2

LOCATION: See Plan

ELEVATION: 562.65

DATE START: 7/13/89

DATE FINISH: 7/19/89

DRILLER: D. G. Fitzpatrick

PREPARED BY: R. L. Burdine

GROUND WATER		DEPTH TO: (ft.)			CASING SAMPLER CORE		
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	HSA	S H
7/14/89	WD	4.2	10.0	10.0	SIZE ID	3 1/4 in.	1 3/8 in. 2 1/4 in
7/20/89	24	4.0	18.0	31.0	HAMMER WT	140 lbs.	
					HAMMER FALL	30 in.	

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0		5	S1	5.0	<u>WELL GRADED SAND (SW)</u> Gray, moist, mostly fine to very coarse sand, some gravel. -ALLUVIUM-
		31		--	
		44		7.0	
		49			
10.0			S2	10.0	<u>SANDY SILT (ML)</u> Dense, gray, moist, mostly silt, some fine sand, trace muscovite, phlogopite, pyrite. -SAPROLITE-
		30/3 in.		--	
				10.2	
15.0					Auger Refusal at 13.1 ft. Note: Advanced with 10 inch tri-cone roller bit to 18.0 ft. and installed 4 inch stainless steel casing. Pressure grouted casing with neat cement grout and 3% bentonite by weight. Grout allowed to set-up for 5 days before coring.
20.0					

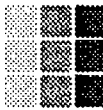
BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPLIT SPOON	MOSTLY 50 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T TUBE	SOME 30 - 45%	NE - NOT ENCOUNTERED
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 25%	UR - NOT READ
31 - 50	DENSE	9 - 15	STIFF	G GRAB SAMPLE	FEW 5 - 10%	
51+	VERY DENSE	16 - 30	VERY STIFF	X OTHER	TRACE <5%	
		31+	HARD	NR NO RECOVERY		BORING NO. BW4

ENVIRONMENTAL CONSULTANTS

BORING NO. BW4

PAGE 2 OF 2

DEPTH IN FEET	DRILL RATE MIN. PER FOOT	CORE NO. DEPTH RANGE	RECOVERY		RQD	FIELD CLASSIFICATION AND REMARKS
			FT.	%		
20						18.0
	4:40	18.0				(Continued from Test Boring Report) Hard to moderately hard, slightly to moderately weatherd, gray to grayish tan, fine to medium-grained QUARTZ-AMPHIBOLE GNEISS, very closely spaced, open, moderately dipping, rough, open joints; very thin, moderately dipping foliation.
	4:20	C1	1.8 5.0	36%	0	
	4:09					
	5:22					
	8:16	22.8				
	25	10:10	22.8			
4:10		C2	1.8 5.0	36%	0	
8:00						
4:30						
5:17		27.9				
30	10:30	27.9				No Recovery
	7:30	C3	0.0 3.0	0%	0	
	7:30	31.0				
35						Bottom of Exploration at 31.0 ft.
40						
FIELD HARDNESS			BEDDING		DISCONTINUITIES JOINT/SHEAR/FRACTURE	WEATHERING
V. HARD - KNIFE CAN'T SCRATCH HARD - SCRATCHES DIFFICULT MOD. HARD - SCRATCHES EASILY SOFT - GROOVES V. SOFT - CARVES			V. THIN <2" THIN 2" - 12" MEDIUM 12" - 36" THICK 36" - 120" V. THICK >120"		V. CLOSE <2" CLOSE 2" - 12" MOD. CLOSE 12" - 36" WIDE 36" - 120" V. WIDE >120"	FRESH V. SLIGHT SLIGHT MODERATE MOD. SEVERE SEVERE V. SEVERE COMPLETE
BORING NO. BW4						



SIRRINE
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CORE BORING REPORT

BORING NO. BW105

PROJECT: MEDLEY FARM R/F/S PHASE II
CLIENT: MEDLEY FARM PRP STEERING COMMITTEE
CONTRACTOR: ATLANTA TESTING AND ENGINEERING
EQUIPMENT USED: CME-550 ATV

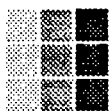
JOB NO: G-8026
PAGE NO: 1 of 3
LOCATION: See Plan
ELEVATION: 669.37
DATE START: 9/14/90
DATE FINISH: 9/17/90
DRILLER: P. Bergman
PREPARED BY: J.A Harrigan

CORE BARREL		ORIENTATION	
TYPE	HQ Triple Tube	<input checked="" type="checkbox"/> VERTICAL	<input type="checkbox"/> INCLINED
ID	~ 2.0 in.	<input type="checkbox"/> HORIZONTAL	BEARING _____ ANGLE FROM VERTICAL _____

DEPTH IN FEET	DRILL RATE MIN. PER FOOT	CORE NO. DEPTH RANGE	RECOVERY		ROD	FIELD CLASSIFICATION AND REMARKS
			FT.	%		
89.0						<p>Note: Due to the close proximity to boring SW4 (within 30 ft.) the split-spoon samples taken from that boring are representative for this location. For this reason this borehole was drilled by using a 10 inch roller bit and mud rotary. From the surface to ~ 70 ft. the borehole was advanced through saprolite and from ~ 70 ft. to 84 ft. the transition zone was encountered. From 84 ft. to 89 ft. a five foot socket was drilled into the competent bedrock. A total of 50 ft. of 4 inch stainless steel and 40 ft. of PVC casing was pressure grouted in place in preparation to core the bedrock.</p> <p>89.0 ft.</p>
	4.5	89.0 C1 90.0	.66 1.0	67	0	
	9.0	90.0				
	2.0					
95.0	5.0	C2	3.33 5.0	67	0	<p>Hard, slightly weathered, moderate to extreme fracturing, red brown, medium grained, QUARTZ-MICA SCHIST; very close to close, tight to open and healed, moderate to steeply dipping joints and fractures, green (epidote?) and dark brown (manganese?) coatings on fracture and joint surfaces.</p>
	3.0					
	3.0	95.0				
	5.5	95.0				
100.0	5.0	C3	4.42 5.3	83	0	<p>Hard, slightly weathered, moderate to extreme fracturing, red brown, medium grained, QUARTZ-MICA SCHIST; very close to close, tight to open and healed, moderate to steeply dipping joints and fractures, green (epidote?) and dark brown (manganese?) coatings on fracture and joint surfaces.</p>
	4.0					
	3.0					
	4.0					
	1.5	100.3				
	2.5	C4	2.83 6.20	41	0	
	6.0					
	6.5					
5.5						
105.0						

FIELD HARDNESS		BEDDING		DISCONTINUITIES JOINT/SHEAR/FRACTURE		WEATHERING	
V. HARD	- KNIFE CAN'T SCRATCH	V. THIN	<2"	V. CLOSE	<2"	FRESH	MOD. SEVERE
HARD	- SCRATCHES DIFFICULT	THIN	2" - 12"	CLOSE	2" - 12"	V. SLIGHT	SEVERE
MOD. HARD	- SCRATCHES EASILY	MEDIUM	12" - 36"	MOD. CLOSE	12" - 36"	SLIGHT	V. SEVERE
SOFT	- GROOVES	THICK	36" - 120"	WIDE	36" - 120"	MODERATE	COMPLETE
V. SOFT	- CARVES	V. THICK	>120"	V. WIDE	>120"		

BORING NO. BW105



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CORE BORING REPORT

BORING NO. BW105

PAGE 2 OF 3

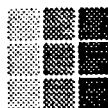
DEPTH IN FEET	DRILL RATE MIN. PER FOOT	CORE NO. DEPTH RANGE	RECOVERY		ROD	FIELD CLASSIFICATION AND REMARKS				
			FT.	%						
105	5.5					Same as above with healed clataclastic zone-red brown bedrock with green matrix. Hard, very slightly weathered, red brown, medium grained, QUARTZ-MICA SCHIST; very close to close, tight to open and healed fractures; moderate to steeply dipping joints; very thin foliation; completely or partially quartz filled openings; green (epidote?) and dark brown (manganese?) coating on fractures and joints.				
	2.2	106.5								
	3.0	C5	2.92 3.50	83	0					
	3.0									
	3.0									
110	3.0	110.0				Hard, very slightly weathered, red brown to greenish brown, medium grained, QUARTZ-MICA SCHIST; very close to close, tight to open and healed fractures, moderate to steeply dipping joints; very thin foliation; completely or partially quartz filled openings; green (epidote?) and dark brown (manganese?) coating on fractures and joints.				
	4.6	110.0								
	4.6									
	4.6									
	4.6									
115	4.6	C6	6.0 10.0	60	0					
	4.6									
	4.6									
	4.6									
	4.6									
120	4.6	120.0					Hard, very slightly weathered, greenish red-brown to blue gray, medium grained, QUARTZ-MICA SCHIST to QUARTZITE SCHIST; very close, tight, steep to vertical dipping joints and fractures, very thin foliation; occasional full or partially quartz filled voids; green (epidote?) and dark brown (manganese?) coating on fractures joints.			
	1.5	120.0								
	3.0									
	3.5									
	4.5									
125	3.5	C7	5.0 10.0	55	7.1					
	2.2									
	5.2									
	3.2									
	4.6									
	3.1					130.0				
FIELD HARDNESS			BEDDING		DISCONTINUITIES JOINT/SHEAR/FRACTURE	WEATHERING				
V. HARD - KNIFE CANT SCRATCH HARD - SCRATCHES DIFFICULT MOD. HARD - SCRATCHES EASILY SOFT - GROOVES V. SOFT - CARVES			V. THIN <2" THIN 2" - 12" MEDIUM 12" - 36" THICK 36" - 120" V. THICK >120"		V. CLOSE <2" CLOSE 2" - 12" MOD. CLOSE 12" - 36" WIDE 36" - 120" V. WIDE >120"	FRESH V. SLIGHT SLIGHT MODERATE		MOD. SEVERE SEVERE V. SEVERE COMPLETE		
BORING NO. BW105										



BORING NO. BW105

PAGE 3 OF 3

DEPTH IN FEET	DRILL RATE MIN. PER FOOT	CORE NO.	RECOVERY		RQD	FIELD CLASSIFICATION AND REMARKS		
			DEPTH RANGE	FT.			%	
-130	1.3	130.0 C8 139.1	9.67 / 9.10	106	91	Hard, very slightly weathered greenish-red brown to blue gray, medium grained, QUARTZ-MICA SCHIST to QUARTZITE SCHIST; very close, tight, steep to vertical dipping joints and fractures; very thin foliation; occasional fully or partially quartz filled voids; green (epidote?) and dark brown (manganese?) coating on fractures joints.		
	1.3							
	1.5							
	2.4							
-135	3.2							
	3.3							
	3.3							
	3.6							
	4.5							
-140						Bottom of Exploration at 139.1 ft.		
						Note: Upon receiving analytical results for discrete interval samples taken in the corehole it was decided that due to the decreasing concentrations of residual chemicals with depth that the lower 30 ft. should be grouted. The corehole was grouted from 139.12 to 114.38 ft. with a bentonite seal from 114.38 to 112.18 ft. Then a 2.0 inch monitoring well was installed. For details see the Ground Water Monitoring Installation Details.		
-145								
-150								
FIELD HARDNESS			BEDDING		DISCONTINUITIES JOINT/SHEAR/FRACTURE		WEATHERING	
V. HARD - KNIFE CANT SCRATCH HARD - SCRATCHES DIFFICULT MOD. HARD - SCRATCHES EASILY SOFT - GROOVES V. SOFT - CARVES			V. THIN <2" THIN 2" - 12" MEDIUM 12" - 36" THICK 36" - 120" V. THICK >120"		V. CLOSE <2" CLOSE 2" - 12" MOD. CLOSE 12" - 36" WIDE 36" - 120" V. WIDE >120"		FRESH V. SLIGHT SLIGHT MODERATE MOD. SEVERE SEVERE V. SEVERE COMPLETE	
BORING NO. BW105								



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CORE BORING REPORT

BORING NO. BW106

PROJECT: MEDLEY FARMS RI PHASE II
CLIENT: MEDLEY FARMS STEERING COMMITTEE
CONTRACTOR: ATLANTA TESTING AND ENGINEERING
EQUIPMENT USED: CME 75

JOB NO: G-8026
PAGE NO: 1 of 2
LOCATION: See Plan
ELEVATION: 592.51
DATE START: 9/24/90
DATE FINISH: 9/27/90
DRILLER: P. Bergman
PREPARED BY: J. Gillespie

CORE BARREL		ORIENTATION			
TYPE	HQ Triple Tube	<input checked="" type="checkbox"/> VERTICAL	<input type="checkbox"/> INCLINED		
ID	~ 2.0 in.	<input type="checkbox"/> HORIZONTAL	BEARING _____ ANGLE FROM VERTICAL _____		

DEPTH IN FEET	DRILL RATE MIN. PER FOOT	CORE NO. DEPTH RANGE	RECOVERY		ROD	FIELD CLASSIFICATION AND REMARKS
			FT.	%		
						54.75 ft.
		54.75 C1	3.2	64	0	Hard, very slightly weathered, light gray, medium grained, QUARTZ FELDSPATHIC SCHIST; hard milky white quartz layer in upper 2-3 inches.
60	6.5	59.75 C2	5.0			
	--	59.75 C2	1.0	100	50	Hard, very slightly weathered, light gray, medium-coarse grained QUARTZ FELDSPATHIC SCHIST; phyllitic sheen; close fractures, moderately dipping foliation.
	6.3	60.75 C3	1.0			
	6.5	60.75 C3	1.7	100	59	Hard, very slightly weathered, light gray, medium to coarse grained QUARTZ FELDSPATHIC SCHIST; phyllitic sheen; fractures are close to very close, moderate to steeply dipping foliation; smooth breaks parallel to foliation.
	6.5	62.45	1.7			
	--	62.45				
65	12.3	C4	2.9	59	16	Note: Zones of muddy water return & loss circulation during drilling also light purple return water.
	4		4.9			
	--	67.53				
	--	67.53				
	17.5	C5	2.5	100	0	Moderately hard, moderately to very slightly weathered, light blue gray, coarse grain, QUARTZ FELDSPATHIC SCHIST; very close to close fractures; breaks along plane of schistosity or foliation; shallow to moderately dipping, foliation; smoky gray quartz lenses, garnetiferous, phyllonitic?
70	16.3	69.86	2.5			
	--	69.86				
	8	C6	4.00	93	0	Moderately hard, slight to very slightly weathered, light gray, coarse grain, QUARTZ FELDSPATHIC SCHIST; very close fractures; parting cleanly along schistosity or foliation planes, few cross cutting iron stained fractures, zones of garnets, crenulation phyllonitic?
	5.3		4.29			
	8.2	74.15				
	--	74.15	1.9			
75		78.55	4.40			See page 2 for Run #7.

FIELD HARDNESS		BEDDING		DISCONTINUITIES JOINT/SHEAR/FRACTURE		WEATHERING	
V. HARD	- KNIFE CANT SCRATCH	V. THIN	<2"	V. CLOSE	<2"	FRESH	MOD. SEVERE
HARD	- SCRATCHES DIFFICULT	THIN	2" - 12"	CLOSE	2" - 12"	V. SLIGHT	SEVERE
MOD. HARD	- SCRATCHES EASILY	MEDIUM	12" - 36"	MOD. CLOSE	12" - 36"	SLIGHT	V. SEVERE
SOFT	- GROOVES	THICK	36" - 120"	WIDE	36" - 120"	MODERATE	COMPLETE
V. SOFT	- CARVES	V. THICK	>120"	V. WIDE	>120"		

BORING NO. BW112



CORE BORING REPORT

BORING NO. BW106

PAGE 2 OF 2

DEPTH IN FEET	DRILL RATE MIN. PER FOOT	CORE NO.	RECOVERY		ROD	FIELD CLASSIFICATION AND REMARKS
			DEPTH RANGE	FT.		
80	6.67	74.15	2.4 4.4	54	0	Moderately hard, moderate to slightly weathered, light greenish-gray, coarse grained, MUSCOVITE SCHIST; very close, fractures, cross cutting fractures and parting along foliation, zones of clay light purple gray in filling fracture.
	4.12	C7				
	7.72					
	9	78.55	1.9 2.05	93	49	Hard to moderately hard, very slight to slight, light gray, coarse grained, QUARTZ FELDSPATHIC SCHIST; close fractures moderate to steeply dipping foliation; cross cutting 90° and oblique angle fractures; parting along foliation.
	6.73	C8				
		80.60				
85						Bottom of Exploration at 80.60 ft.
90						
95						
100						

FIELD HARDNESS		BEDDING		DISCONTINUITIES JOINT/SHEAR/FRACTURE		WEATHERING	
V. HARD	- KNIFE CAN'T SCRATCH	V. THIN	<2"	V. CLOSE	<2"	FRESH	MOD. SEVERE
HARD	- SCRATCHES DIFFICULT	THIN	2" - 12"	CLOSE	2" - 12"	V. SLIGHT	SEVERE
MOD. HARD	- SCRATCHES EASILY	MEDIUM	12" - 36"	MOD. CLOSE	12" - 36"	SLIGHT	V. SEVERE
SOFT	- GROOVES	THICK	36" - 120"	WIDE	36" - 120"	MODERATE	COMPLETE
V. SOFT	- CARVES	V. THICK	>120"	V. WIDE	>120"		

BORING NO. **BW106**



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CORE BORING REPORT

BORING NO. BW108

PROJECT: MEDLEY FARM R/FS PHASE II
CLIENT: MEDLEY FARM PRP STEERING COMMITTEE
CONTRACTOR: ATLANTA TESTING AND ENGINEERING
EQUIPMENT USED: CME-550 ATV

JOB NO: G-8026
PAGE NO: 1 of 2
LOCATION: See Plan
ELEVATION: 603.15
DATE START: 9/14/90
DATE FINISH: 9/17/90
DRILLER: K. Warren
PREPARED BY: J. Wylie

CORE BARREL		ORIENTATION	
TYPE	HQ Triple Tube	<input checked="" type="checkbox"/> VERTICAL	<input type="checkbox"/> INCLINED
ID	~ 2.0 in.	<input type="checkbox"/> HORIZONTAL	BEARING _____ ANGLE FROM VERTICAL _____

DEPTH IN FEET	DRILL RATE MIN. PER FOOT	CORE NO. DEPTH RANGE	RECOVERY		ROD	FIELD CLASSIFICATION AND REMARKS
			FT.	%		
						<p>Note: Due to the close proximity to boring SW108 (within 10 ft.) the split-spoon samples taken from that boring are representative for this location. For this reason this borehole was drilled by using a 10 inch roller bit and mud rotary. From the surface to ~ 40 ft. the borehole was advanced through saprolite and from ~ 40 ft. to 68 ft. the transition zone was encountered. From 68 to 73.8 ft. a five foot socket was drilled into the competent bedrock. A total of 75 ft. of 4 inch stainless steel casing was pressure grouted in place in preparation to core the bedrock.</p> <p>73.8 ft. (TOP OF COREHOLE)</p>
75.0	--	73.8 C1 74.8	0.9 1.0	90.0	50	(See C2)
	--	74.8				
	--	C2	2.9 3.5	82.9	19	<p>Moderately hard, slightly weathered, gray, medium-grained, QUARTZO-FELDSPATHIC SCHIST; close to very close, horizontal to steeply dipping fractures; very thin horizontal to steeply dipping foliation. Abundant muscovite and garnet. Healed fractures present. Phyllitic in texture/appearance in places. Also, in places, appears transitional to gneiss.</p>
	--	78.3				
	--	78.3				(Same as C2)
80.0	3.7					Note: Fractures and some foliations healed with green mineral (epidote?). Very small garnets and green mineral most prevalent on fracture partings (related to subsequent metamorphic event?).
	5.0	C3	4.94 5.0	98.8	42	
	3.7					
	7.0					
	--	83.3				
	--	83.3				
85.0	3.25					<p>Moderately hard, slightly weathered, gray, medium-grained, QUARTZO-FELDSPATHIC SCHIST; close to very close, horizontal to steeply dipping fractures; very thin horizontal to steeply dipping foliation. Abundant muscovite and garnet. Healed fractures present. Phyllitic in texture/appearance in places. Also, in places, appears transitional to gneiss.</p>
	3.0	C4	5.0 5.0	100	60	
	3.5					
	3.5					
	4.0	88.3				
	--	88.3				
90.0	2.5					

FIELD HARDNESS		BEDDING		DISCONTINUITIES JOINT/SHEAR/FRACTURE		WEATHERING	
V. HARD	- KNIFE CAN'T SCRATCH	V. THIN	<2"	V. CLOSE	<2"	FRESH	MOD. SEVERE
HARD	- SCRATCHES DIFFICULT	THIN	2" - 12"	CLOSE	2" - 12"	V. SLIGHT	SEVERE
MOD. HARD	- SCRATCHES EASILY	MEDIUM	12" - 36"	MOD. CLOSE	12" - 36"	SLIGHT	V. SEVERE
SOFT	- GROOVES	THICK	36" - 120"	WIDE	36" - 120"	MODERATE	COMPLETE
V. SOFT	- CARVES	V. THICK	>120"	V. WIDE	>120"		

BORING NO. BW108



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CORE BORING REPORT

BORING NO. BW108

PAGE 2 OF 2

[illegible]

CORE BORING REPORT

 BORING NO. BW109

 PROJECT: MEDLEY FARMS RI PHASE II
 CLIENT: MEDLEY FARMS STEERING COMMITTEE
 CONTRACTOR: ATLANTA TESTING AND ENGINEERING
 EQUIPMENT USED: CME 75

 JOB NO: G-8026
 PAGE NO: 1 of 2
 LOCATION: BW109
 ELEVATION: 659.15
 DATE START: 10/11/90
 DATE FINISH: 10/11/90
 DRILLER: P. Bergman
 PREPARED BY: J. Gillespie

CORE BARREL		ORIENTATION	
TYPE	HQ Triple Tube	<input checked="" type="checkbox"/> VERTICAL	<input type="checkbox"/> INCLINED
ID	~ 2.0 inches	<input type="checkbox"/> HORIZONTAL	BEARING _____ ANGLE FROM VERTICAL _____

DEPTH IN FEET	DRILL RATE MIN. PER FOOT	CORE NO. DEPTH RANGE	RECOVERY		RQD	FIELD CLASSIFICATION AND REMARKS	
			FT.	%			
						<p>Note: Due to close proximity to boring SW109 (within 10 ft.) the split-spoon samples taken from that boring are representative for this location. For this reason this borehole was drilled by using a tri-cone roller bit and mud rotary. From the surface to ~ 50 ft. the borehole was advanced through saprolite and from ~ 50 ft. to 64 ft. the transition zone was encountered. From 64.0 ft. to 69.5 ft. a five foot socket was drilled into the competent bedrock. A total of 35 ft. of 4-in. stainless steel casing and 35 ft. of PVC casing was pressured grouted in place.</p> <p>69.5 feet (TOP OF COREHOLE)</p>	
-70	4.75	69.5	2.4 2.6	92	0	Medium hard, moderate to moderately severely weathered, light gray, coarse grained, QUARTZO-FELDSPATHIC SCHIST; close fractures, moderate to steeply dipping foliation.	
	5.50	C1					
	6.05	72.1					
-75	7.0	72.1	2.4 4.95	48	0	Medium hard, moderate to moderately severely weathered, light gray, coarse grained, QUARTZO-FELDSPATHIC SCHIST; very close to close fractures, moderate to steeply dipping foliation; fractures also exhibit manganese and or iron staining.	
	8.15	C2					
	8.0						
	10.05						
	9.05						77.05
-80	8.10	77.05	2.0 5.0	40	0	Medium hard, moderate to moderately severely weathered, light gray with orange to black stain, coarse grained, QUARTZO-FELDSPATHIC SCHIST; very close cross cutting fractures, with manganese and iron staining along breaks, moderate to steeply dipping foliation.	
	8	C3					
	9						
	7.50						
	6.05						82.15
	6.10						82.15
8.05	C4						
8.05							
-85							

FIELD HARDNESS		BEDDING		DISCONTINUITIES JOINT/SHEAR/FRACTURE		WEATHERING	
V. HARD	- KNIFE CAN'T SCRATCH	V. THIN	< 2"	V. CLOSE	< 2"	FRESH	MOD. SEVERE
HARD	- SCRATCHES DIFFICULT	THIN	2" - 12"	CLOSE	2" - 12"	V. SLIGHT	SEVERE
MOD. HARD	- SCRATCHES EASILY	MEDIUM	12" - 36"	MOD. CLOSE	12" - 36"	SLIGHT	V. SEVERE
SOFT	- GROOVES	THICK	36" - 120"	WIDE	36" - 120"	MODERATE	COMPLETE
V. SOFT	- CARVES	V. THICK	> 120"	V. WIDE	> 120"		

 BORING NO. BW109



ENVIRONMENTAL CONSULTANTS

CORE BORING REPORT

BORING NO. BW109

PAGE 2 OF 2

DEPTH IN FEET	DRILL RATE MIN. PER FOOT	CORE NO. DEPTH RANGE	RECOVERY		RQD	FIELD CLASSIFICATION AND REMARKS		
			FT.	%				
90	6	C4 87.15	2.9 5.0	58	0	Medium hard, moderate to moderately severely weathered, light gray, coarse grained, QUARTZ-FELDPATHIC SCHIST; moderate to steeply dipping foliation, with black manganese staining along fracture faces.		
	7							
	8							
	6.20	C5 90.0	2.0 2.85	70	0	Medium hard, moderate to moderately severely weathered, light gray, coarse grained, QUARTZ-FELDPATHIC SCHIST; moderate to steeply dipping foliation; coarse to very coarse muscovite along fracture faces also very close fractures in a variety of orientations, with black manganese staining along fracture faces.		
	7.05							
						Bottom of Exploration at 90.0 feet.		
95								
100								
105								
110								
FIELD HARDNESS			BEDDING		DISCONTINUITIES JOINT/SHEAR/FRACTURE		WEATHERING	
V. HARD - KNIFE CAN'T SCRATCH HARD - SCRATCHES DIFFICULT MOD. HARD - SCRATCHES EASILY SOFT - GROOVES V. SOFT - CARVES			V. THIN <2" THIN 2" - 12" MEDIUM 12" - 36" THICK 36" - 120" V. THICK >120"		V. CLOSE <2" CLOSE 2" - 12" MOD. CLOSE 12" - 36" WIDE 36" - 120" V. WIDE >120"		FRESH V. SLIGHT SLIGHT MODERATE MOD. SEVERE SEVERE V. SEVERE COMPLETE	
BORING NO. BW109								

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TEST BORING REPORT

BORING NO. BW110

PROJECT: MEDLEY FARM RI/FS PHASE II

CLIENT: MEDLEY FARM STEERING COMMITTEE

CONTRACTOR: ATLANTA TESTING & ENGINEERING

EQUIPMENT USED: CME-550 ATV

JOB NO: G-8026

PAGE NO: 1 of 3

LOCATION: See Plan

ELEVATION: 625.23

DATE START: 9/11/90

DATE FINISH: 9/13/90

DRILLER: P. Bergman

PREPARED BY: R. Burdine

GROUND WATER		DEPTH TO: (ft.)			CASING	SAMPLER	CORE BARREL
DATE	HRS AFTER COMP	WATER	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE	HSA	S
9/11/90	12	NE	35.5	39.5	SIZE ID	6 1/4 in.	1 3/8 in.
					HAMMER WT		140 lbs.
					HAMMER FALL		30 in.

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0					
		6	S1	3.5	SILTY CLAY (CL) Stiff, mottled orangish-yellowish and reddish-orange, dry mostly clay, some silt.
		10		--	
		10			
10.0		12		5.5	-RESIDUAL SOIL- <hr/> SILT (ML) Medium dense, tan to gray, dry, mostly silt, little mica flakes, trace clay.
		6	S2	8.5	
		8		--	
		8			
15.0		11		10.5	-SAPROLITE (SCHIST)- SILT (ML) Medium dense, tan to gray, slightly moist, mostly silt, little mica flakes, trace clay.
		5	S3	13.5	
		6		--	
		9			
20.0		14		15.5	-SAPROLITE (SCHIST)- SILT (ML) Medium dense, light tan, slightly moist, mostly silt, little mica flakes, trace clay.
				18.5	

BLOWS/FT.	DENSITY	BLOWS/FT.	CONSISTENCY	SAMPLE ID.	COMPONENT %	GROUND WATER ABBREV.
0 - 4	VERY LOOSE	0 - 2	VERY SOFT	S SPLIT SPOON	MOSTLY 50 - 100%	WD - WHILE DRILLING
5 - 10	LOOSE	3 - 4	SOFT	T TUBE	SOME 30 - 45%	NE - NOT ENCOUNTERED
11 - 30	MEDIUM DENSE	5 - 8	MEDIUM STIFF	U UNDISTURBED PISTON	LITTLE 15 - 25%	UR - NOT READ
31 - 50	DENSE	9 - 15	STIFF	G GRAB SAMPLE	FEW 5 - 10%	
51+	VERY DENSE	16 - 30	VERY STIFF	X OTHER	TRACE <5%	
		31+	HARD	NR NO RECOVERY		BORING NO. BW110

TEST BORING REPORT

BORING NO. BW110

PAGE 2 OF 3

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMPLER BLOWS PER 6 INCHES	SAMPLE NUMBER	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS		
25.0		-		20.5	<p>CLAYEY SILT (ML) Very dense, tan, slightly moist, mostly silt, some clay, few mica, trace gravel (gneiss). -SAPROLITE (GNEISS)-</p> <p>Note: Drilling becoming extremely slow due to material density.</p> <p>CLAYEY SILT (ML) Very dense, tan, slightly moist, mostly silt, some clay, few mica, trace gravel (gneiss). -SAPROLITE (GNEISS)-</p> <p>CLAYEY SILT (ML) Very dense, tan, slightly moist, mostly silt, some clay, few mica, trace gravel (gneiss). -SAPROLITE (GNEISS)-</p> <p>CLAYEY SILT (ML) Very dense, tan, slightly moist, mostly silt, some clay, few mica, trace gravel (gneiss). -SAPROLITE (GNEISS)-</p> <p>CLAYEY SILT (ML) Very dense, tan, slightly moist, mostly silt, some clay, few mica, trace gravel (gneiss). -SAPROLITE (GNEISS)-</p> <p>AUGER REFUSAL AT 39.5 FEET.</p> <p>Note: Ground water not encountered during augering. Upon obtaining auger refusal set up to mud rotary into competent rock and set a bedrock monitoring well</p>		
		7	S5	23.5			
		15		--			
		20					
		32		25.5			
	6	S6	28.5				
	22		--				
	25						
	24		30.5				
	10	S7	33.5				
	33		--				
	26						
	42		35.5				
	100	S8	38.5				
			--				
			39.0				



PAGE 3 OF 3

DEPTH IN FEET	DRILL RATE MIN. PER FOOT	CORE NO. DEPTH RANGE	RECOVERY		ROD	FIELD CLASSIFICATION AND REMARKS		
			FT.	%				
65						64.1 Feet (Continued From Test Boring Report) Moderately hard to hard, moderately weathered, light-olive gray, medium grained, MUSCOVITE BIOTITE SCHIST; very close, moderately dipping joints; QUARTZ-FELDSPAR lens with vugs.		
	4	64.1	.6	27	0			
	—	C1 66.27	2.17					
	.8	66.27	5.0 5.0	100	66			
	3.4	C2						
4.4								
3.4								
70	3	71.27	5.0 5.0	100	54	Very hard, fresh, light olive gray with moderate yellow green veins infilling along fractures, medium grained, GNEISS; well foliated, close to moderately close fractures, moderate to steeply dipping foliation; 10-15% disseminated pyrite, olivine mineral along fractures, quartz feldspathic medium grain veins, parting along foliation planes. Note: Olivine mineral more prevalent along fractures, voids and cavities in quartz veins; breaks predominately along foliation.		
	—	71.27						
	4.8	C3						
	4.4							
	6.2							
75	6.0	76.27	5.0 5.0	100	92	Very hard, fresh, light olive gray with moderate yellow green veins infilling along fractures, medium grained, GNEISS; well foliated, close to moderately close fractures, very thin, moderate to steeply dipping foliation; 10-15% disseminated pyrite, olivine mineral along fractures, quartz feldspathic medium grain veins, parting along foliation planes; Note: Olivine mineral is significantly less, pyrite finely disseminated, medium gray no vugs or cavities; fractures predominately across foliation.		
	5.4	76.27						
	7.0	C4						
	7.8							
	6.5							
80	6	81.27	3.05 3.23	94	94	Very hard, fresh, light olive gray with moderate yellow green veins infilling along fractures, medium grained, GNEISS; well foliated, close to moderately close fractures, moderate to steeply dipping foliation; 10-15% disseminated pyrite, olivine mineral along fractures, quartz feldspathic medium grain veins, parting along foliation planes.		
	5	81.27						
	7	C5						
	8							
							84.5	
85						Bottom of Exploration at 84.5 ft.		
FIELD HARDNESS			BEDDING		DISCONTINUITIES JOINT/SHEAR/FRACTURE		WEATHERING	
V. HARD - KNIFE CAN'T SCRATCH HARD - SCRATCHES DIFFICULT MOD. HARD - SCRATCHES EASILY SOFT - GROOVES V. SOFT - CARVES			V. THIN THIN MEDIUM THICK V. THICK		V. CLOSE CLOSE MOD. CLOSE WIDE V. WIDE		FRESH V. SLIGHT SLIGHT MODERATE MOD. SEVERE SEVERE V. SEVERE COMPLETE	
							BORING NO. BW110	

CORE BORING REPORT

 BORING NO. BW111

 PROJECT: MEDLEY FARMS RI PHASE II
 CLIENT: MEDLEY FARMS STEERING COMMITTEE
 CONTRACTOR: ATLANTA TESTING AND ENGINEERING
 EQUIPMENT USED: CME 75

 JOB NO: G-8026
 PAGE NO: 1 of 3
 LOCATION: BW111
 ELEVATION: 669.37
 DATE START: 10/9/90
 DATE FINISH: 10/9/90
 DRILLER: P. Bergman
 PREPARED BY: J. Gillespie

CORE BARREL		ORIENTATION	
TYPE	HQ Triple	<input checked="" type="checkbox"/> VERTICAL	<input type="checkbox"/> INCLINED
ID	~ 2.0 in.	<input type="checkbox"/> HORIZONTAL	BEARING _____ ANGLE FROM VERTICAL _____

DEPTH IN FEET	DRILL RATE MIN. PER FOOT	CORE NO. DEPTH RANGE	RECOVERY		ROD	FIELD CLASSIFICATION AND REMARKS
			FT.	%		
						<p>Note: Due to the close proximity to boring BW105 and SW4, no split spoon samples were taken for this location. The borehole was advanced by 10 inch air rotary methods with filtered air. From the surface to ~70 feet, the borehole was advanced through saprolite and from ~70 feet to ~98 feet, the transition zone was encountered. From ~98 feet to 189.0 feet was drilled through competent bedrock. A total of 150.0 feet of 4-inch stainless steel and 40 feet of PVC were pressure grouted in place in preparation to core the bedrock.</p> <p>189.0 feet</p>
190	12	189.0				<p>Hard to very hard, fresh, dark to light gray, fine to medium grained, BIOTITE GNEISS; close, shallow dipping fractures well foliated.</p> <p>Note: Epidote mineral deposited along fractures.</p>
	14.5					
	11.75					
	12.5					
	11		10.0 / 10.0	100	93	
	12					
195	12					
	12					
	10					
	9.5					
	9	199.0				<p>Hard to very hard, fresh, dark to light gray, fine to medium grained, BIOTITE GNEISS; close, shallow dipping fractures well foliated.</p> <p>Note: Epidote mineral deposited along fractures.</p>
200	9	199.0				
	11		10.0 / 10.0	100	95	
	14					
	14.5					
	14.5					
205						

FIELD HARDNESS		BEDDING		DISCONTINUITIES JOINT/SHEAR/FRACTURE		WEATHERING	
V. HARD	- KNIFE CANT SCRATCH	V. THIN	<2"	V. CLOSE	<2"	FRESH	MOD. SEVERE
HARD	- SCRATCHES DIFFICULT	THIN	2" - 12"	CLOSE	2" - 12"	V. SLIGHT	SEVERE
MOD. HARD	- SCRATCHES EASILY	MEDIUM	12" - 36"	MOD. CLOSE	12" - 36"	SLIGHT	V. SEVERE
SOFT	- GROOVES	THICK	36" - 120"	WIDE	36" - 120"	MODERATE	COMPLETE
V. SOFT	- CARVES	V. THICK	>120"	V. WIDE	>120"		

 BORING NO. BW111



CORE BORING REPORT

BORING NO. BW111

PAGE 2 OF 3

DEPTH IN FEET	DRILL RATE MIN. PER FOOT	CORE NO.	RECOVERY		RQD	FIELD CLASSIFICATION AND REMARKS		
			DEPTH RANGE	FT.			%	
205	13			10.0 10.0	100	95	Hard to very hard, fresh, dark to light gray, fine to medium grained, BIOTITE GNEISS; close, shallow dipping fractures well foliated. Note: Green mineral along healed fractures; epidote mineral group.	
	12							
	15							
	--							
210	9	208.6	C3	9.7 10.0	97	95	Hard to very hard, fresh, medium gray with moderate yellowish green, medium to fine grained, GNEISS; close, moderately to steeply dipping smooth joints and fractures, moderately foliated, epidote mineral in-filling fractures and also observed along joint faces. Note: No significant staining along fractures.	
	8							
	10							
	8							
	7							
	7							
215	13	218.6					Shears at ~ 209 and 214 ft. Hard to very hard, fresh, medium gray with moderate yellowish green, medium to fine grained, GNEISS; close, moderately to steeply dipping, smooth joints and fractures, moderately foliated, epidote mineral in-filling fractures and also observed along joint faces.	
	13							
	7							
	7							
220	6	218.6	C4	9.75 9.75	100	94	Hard to very hard, fresh, medium gray with moderate yellowish green, medium to fine grained, GNEISS; close to moderately close, shallow to moderately dipping, joints and fractures, moderately foliated, epidote mineral in-filling fractures and also observed along joint faces. Fractures are tighter than C3 with no clean breaks. Note: Some limited milky white quartz veining.	
	9							
	8							
	8							
	7							
	8							
225	8	228.35						
	6							
	8							
	8							
230	8	228.35						
	7							
FIELD HARDNESS			BEDDING		DISCONTINUITIES JOINT/SHEAR/FRACTURE		WEATHERING	
V. HARD - KNIFE CANT SCRATCH HARD - SCRATCHES DIFFICULT MOD. HARD - SCRATCHES EASILY SOFT - GROOVES V. SOFT - CARVES			V. THIN <2" THIN 2" - 12" MEDIUM 12" - 36" THICK 36" - 120" V. THICK >120"		V. CLOSE <2" CLOSE 2" - 12" MOD. CLOSE 12" - 36" WIDE 36" - 120" V. WIDE >120"		FRESH V. SLIGHT SLIGHT MODERATE MOD. SEVERE SEVERE V. SEVERE COMPLETE	
BORING NO. BW111								



BORING NO. BW111

PAGE 3 OF 3

DEPTH IN FEET	DRILL RATE MIN. PER FOOT	CORE NO.	RECOVERY		RQD	FIELD CLASSIFICATION AND REMARKS
			DEPTH RANGE	FT.		
230	7	C5	10.15 / 10.15	100	100	Hard to very hard, fresh, medium dark gray, medium grained, AMPHIBOLITE GNEISS; tight competent, healed fractures separated due to drilling; shallow to moderately dipping foliation; no staining or oxidation along healed fractures. Note: Milky white Qtz vein at approximately 234 ft.
	6					
	7					
	9					
	9					
235	8					
	9					
	8					
	8					
	8					
	238.5	C6	10.0 / 10.0	100	100	Hard to very hard, fresh, medium dark gray, medium grained, AMPHIBOLITE GNEISS; tight competent, healed fractures separated due to drilling; shallow to moderately dipping foliation, no staining or oxidation along healed fractures.
	238.5					
240	8					
	11					
	14					
	10					
	11					
	17					
245	7					
	12					
	9					
	11	248.4				Bottom of Exploration at 248.4 ft.
250						
255						

FIELD HARDNESS		BEDDING		DISCONTINUITIES JOINT/SHEAR/FRACTURE		WEATHERING	
V. HARD	- KNIFE CANT SCRATCH	V. THIN	<2"	V. CLOSE	<2"	FRESH	MOD. SEVERE
HARD	- SCRATCHES DIFFICULT	THIN	2" - 12"	CLOSE	2" - 12"	V. SLIGHT	SEVERE
MOD. HARD	- SCRATCHES EASILY	MEDIUM	12" - 36"	MOD. CLOSE	12" - 36"	SLIGHT	V. SEVERE
SOFT	- GROOVES	THICK	36" - 120"	WIDE	36" - 120"	MODERATE	COMPLETE
V. SOFT	- CARVES	V. THICK	>120"	V. WIDE	>120"		
BORING NO. BW111							



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CORE BORING REPORT

BORING NO. BW112

PROJECT: MEDLEY FARMS RI PHASE II
CLIENT: MEDLEY FARMS STEERING COMMITTEE
CONTRACTOR: ATLANTA TESTING AND ENGINEERING
EQUIPMENT USED: CME 75

JOB NO: G-8026
PAGE NO: 1 of 3
LOCATION: See Plan
ELEVATION: 661.84
DATE START: 10/11/90
DATE FINISH: 10/25/90
DRILLER: P. Bergman
PREPARED BY: J. Gillespie

CORE BARREL		ORIENTATION	
TYPE	HQ Triple Tube	<input checked="" type="checkbox"/> VERTICAL	<input type="checkbox"/> INCINED
ID	2.0 inch	<input type="checkbox"/> HORIZONTAL	BEARING _____ ANGLE FROM VERTICAL _____

DEPTH IN FEET	DRILL RATE MIN. PER FOOT	CORE NO. DEPTH RANGE	RECOVERY		RQD	FIELD CLASSIFICATION AND REMARKS
			FT.	%		
						Note:
						179.0 feet
180	18	179.0				<p>Very hard, fresh, medium dark gray, fine to medium grained, GNEISS; moderately close, shallow to steeply dipping, smooth joints with moderate yellowish green mineral along faces; also slickensides observed.</p> <p>Note: Rock contains higher percentage of mafics; also upper .3 feet was primarily moderate yellowish green mineral.</p>
	13					
	13	C1	5.8	97	93	
	10		6.0			
	11					
185	6	185.0				
	8	185.0				
	9					
	6					
	6					
190	6	C2	10.0	100	74	<p>Very hard, fresh, medium dark gray to dark gray, fine to medium grained, GNEISS; close, moderate to steeply dipping, shears parallel and cross cutting foliation.</p> <p>Note: Pegmatitic zones: Coarse to very coarse grain mica/feldspar.</p> <p>Approx. 189 ft. Fracture with green mineral along faces of fractures.</p>
	7		10.0			
	7					
	5					
	7					
	7					
195	7	195.0				

FIELD HARDNESS		BEDDING		DISCONTINUITIES JOINT/SHEAR/FRACTURE		WEATHERING	
V. HARD	- KNIFE CAN'T SCRATCH	V. THIN	<2"	V. CLOSE	<2"	FRESH	MOD. SEVERE
HARD	- SCRATCHES DIFFICULT	THIN	2" - 12"	CLOSE	2" - 12"	V. SLIGHT	SEVERE
MOD. HARD	- SCRATCHES EASILY	MEDIUM	12" - 36"	MOD. CLOSE	12" - 36"	SLIGHT	V. SEVERE
SOFT	- GROOVES	THICK	36" - 120"	WIDE	36" - 120"	MODERATE	COMPLETE
V. SOFT	- CARVES	V. THICK	>120"	V. WIDE	>120"		

BORING NO. BW112

CORE BORING REPORT

BORING NO. BW112

PAGE 2 OF 3

DEPTH IN FEET	DRILL RATE MIN. PER FOOT	CORE NO.	RECOVERY		ROD	FIELD CLASSIFICATION AND REMARKS
		DEPTH RANGE	FT.	%		
200	3	195.0	4.0 / 4.0	100	86	Very hard, fresh, medium dark gray to dark gray, fine to medium grained, GNEISS; close, moderate to steeply dipping, shears parallel and cross cutting foliation. Note: Healed fractures and mineralized vuggy area 195-196.5. Very hard, fresh, medium dark gray to dark gray, fine to medium grained, AMPHIBOLE GNEISS; drill breaks usually along healed fractures and foliation moderate to steeply dipping. Note: Moderate yellowish green mineralization along healed fractures. No evidence of staining along fractures. At 202.3 vuggy area, but no evidence of oxidation.
	7	C3				
	7					
	7					
	7	199.0	9.8 / 10.0	98	98	
	7	199.0				
	11	C4				
	10					
	8					
	6.5					
	6.4					
6						
7						
8						
5	209.0	10.0 / 10.0	100	100		
7	209.0					
8	C3					
5						
17						
7						
7						
7						
6						
7						
7	219.0					
6	219.0					
220						

FIELD HARDNESS		BEDDING		DISCONTINUITIES JOINT/SHEAR/FRACTURE		WEATHERING	
V. HARD	- KNIFE CAN'T SCRATCH	V. THIN	<2"	V. CLOSE	<2"	FRESH	MOD. SEVERE
HARD	- SCRATCHES DIFFICULT	THIN	2" - 12"	CLOSE	2" - 12"	V. SLIGHT	SEVERE
MOD. HARD	- SCRATCHES EASILY	MEDIUM	12" - 36"	MOD. CLOSE	12" - 36"	SLIGHT	V. SEVERE
SOFT	- GROOVES	THICK	36" - 120"	WIDE	36" - 120"	MODERATE	COMPLETE
V. SOFT	- CARVES	V. THICK	>120"	V. WIDE	>120"		

BORING NO. BW112	
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BORING NO. BW112

APPENDIX E

MONITORING WELL INSTALLATION DETAILS

**MEDLEY FARMS SITE RI
GROUND WATER MONITORING WELL ELEVATIONS
SEC JOB NO. G-8026**

WELL/PT	LONGITUDE	LATITUDE	ELEVATION SLAB	ELEVATION TOP OF WELL CASING
SW1	81-40-00.734	34-59-07.128	688.66	690.47
SW3	81-39-39.003	34-58-51.655	669.90	671.56
SW4	81-39-49.236	34-58-44.011	668.68	671.39
SW101	81-39-53.682	34-58-52.597	601.15	604.18
SW102	81-39-56.177	34-58-49.499	617.43	620.07
SW103	81-40-02.306	34-58-50.495	633.40	635.68
SW104	81-40-05.451	34-58-53.413	647.46	649.85
SW106	81-40-01.449	34-58-48.070	592.91	596.12
SW108	81-39-57.235	34-58-57.210	602.85	605.28
SW109	81-40-02.960	34-58-51.859	658.65	661.26
PZ1	81-39-12.983	34-58-37.436	~ 573.44	575.41
PZ101	81-40-06.023	34-58-58.209	686.04	688.49
BW1	81-40-00.454	34-59-07.175	688.65	689.90
BW2	81-39-37.711	34-58-43.077	661.26	662.99

**MEDLEY FARMS SITE RI
GROUND WATER MONITORING WELL ELEVATIONS
SEC JOB NO. G-8026**

WELL/PT	LONGITUDE	LATITUDE	ELEVATION SLAB	ELEVATION TOP OF WELL CASING
BW3	81-39-12.903	34-58-37.836	573.44	574.82
BW4	81-39-10.868	34-58-08.916	562.65	564.32
BW105	81-40-03.299	34-58-54.333	669.37	671.55
BW106	81-40-01.475	34-58-47.965	592.51	595.76
BW108	81-39-57.279	34-58-57.302	603.15	605.64
BW109	81-40-02.864	34-58-51.916	659.15	661.47
BW110	81-39-55.013	34-58-51.691	625.23	626.36
BW111	81-40-03.204	34-58-54.503	~ 669.37	672.41
BW112	81-39-59.022	34-58-53.616	661.84	664.08
MD2A*	81-39-49.677	34-58-44.738	- -	670.66

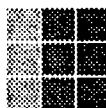
* SCDHEC Well
CONTROL POINTS:

PK Nail - BW2

Long: 81-39-37.739 / N 139547.1000
Lat: 34-58-43.074 / E 366724.7467

"X" in SW4

Long: 81-39-49.219 / N 139583.9181
Lat: 34-58-44.016 / E 366434.4926



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GROUND WATER MONITORING INSTALLATION DETAIL

PROJECT: <u>MEDLEY FARM SITE R/FS</u>		JOB NO. <u>G-8026</u>
LOCATION: <u>GAFFNEY, SOUTH CAROLINA</u>		INSTALLATION NO. <u>SW1</u>
CLIENT: <u>MEDLEY FARM STEERING COMMITTEE</u>		TYPE OF INSTALLATION <u>SAPROLITE MONITORING WELL</u>
CONTRACTOR: <u>ENVIRONMENTAL DRILLING & SERVICES</u>		BORING NO. <u>SW1</u>
DRILLER: <u>D. G. FITZPATRICK</u>	CERTIFICATION NO: <u>593</u>	LOCATION <u>SEE PLAN</u>
SEC FIELD REPRESENTATIVE: <u>RICHARD L. BURDINE</u>		INSTALLATION DATE <u>6/13/89</u>

SURVEY DATUM <u>N.G.V.D.</u>		TOP OF PROTECTIVE CASING (CAP OPEN) EL. <u>690.57</u> STICKUP <u>2.5 ft.</u>
GROUND SURFACE ELEVATION: <u>688.66</u>		TOP OF WELL CASING OR RISER PIPE EL. <u>690.47</u> DEPTH <u>2.4 ft.</u>
SUMMARIZE SOIL CONDITIONS, BACKFILL AND SEALS (NOT TO SCALE)	CLAYEY SILT (ML) 7.0	TYPE OF SURFACE SEAL <u>Concrete Pad</u> THICKNESS OF SURFACE SEAL <u>4.0 in.</u>
	SILT (ML)	TYPE OF PROTECTIVE CASING <u>Steel</u> INSIDE DIAMETER <u>4.0 in.</u> TOTAL LENGTH <u>4.4 ft.</u>
		BOTTOM OF PROTECTIVE CASING EL. <u>686.17</u> DEPTH <u>1.9 ft.</u>
		TYPE OF WELL CASING OR RISER PIPE <u>Sch. 40 PVC</u> INSIDE DIAMETER <u>2.0 in.</u>
	NEAT CEMENT GROUT WITH 3% BENTONITE BY WEIGHT	APPROXIMATE DIAMETER OF BOREHOLE <u>10 in.</u>
	37.5 ft.	TOP OF WELL POINT EL. <u>644.46</u> DEPTH <u>44.2 ft.</u>
	BENTONITE	TYPE OF WELLPOINT <u>Stainless Steel</u>
	39.83 ft.	SCREEN GAUGE OR SIZE OF OPENINGS <u>0.010 in.</u>
	FOSTER DIXIANA FX-30 SILICA SAND	INSIDE DIAMETER <u>2.0 in.</u>
	41.9 ft.	TYPE OF BACKFILL AROUND POINT <u>FX-50 Silica Sand</u>
48.0	BOTTOM OF WELL POINT EL. <u>629.26</u> DEPTH <u>59.4 ft.</u>	
CLAYEY SILT WITH SAND (ML)	BOTTOM OF BOREHOLE EL. <u>623.66</u> DEPTH <u>65.0 ft.</u>	
FOSTER-DIXIANA FX-50 SILICA SAND		

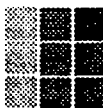
• FIGURES ABOVE REFER TO DEPTH IN FEET

• ALL DEPTHS ARE REFERENCED TO GROUND SURFACE

46.60 ft. + 15.2 ft. = 61.80 ft.

LENGTH OF RISER PIPE LENGTH OF POINT TOTAL

BENTONITE SEALS



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GROUND WATER MONITORING INSTALLATION DETAIL

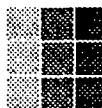
PROJECT: <u>MEDLEY FARM SITE RVFS</u>		JOB NO <u>G-8026</u>
LOCATION: <u>GAFFNEY, SOUTH CAROLINA</u>		INSTALLATION NO <u>SW3</u>
CLIENT: <u>MEDLEY FARM STEERING COMMITTEE</u>		TYPE OF INSTALLATION <u>SAPROLITE MONITORING WELL</u>
CONTRACTOR: <u>ENVIRONMENTAL DRILLING & SERVICES</u>		BORING NO. <u>SW3</u>
DRILLER: <u>D. G. FITZPATRICK</u> CERTIFICATION NO: <u>593</u>		LOCATION <u>SEE PLAN</u>
SEC FIELD REPRESENTATIVE: <u>RICHARD L. BURDINE</u>		INSTALLATION DATE <u>6/23/89</u>

SURVEY DATUM <u>N.G.V.D.</u>		TOP OF PROTECTIVE CASING (CAP OPEN) EL. <u>---</u> STICKUP <u>---</u>
GROUND SURFACE ELEVATION: <u>669.90</u>		TOP OF WELL CASING OR RISER PIPE EL. <u>671.56</u> DEPTH <u>2.08 ft.</u>
SUMMARIZE SOIL CONDITIONS, BACKFILL AND SEALS (NOT TO SCALE)	SILT (ML)	TYPE OF SURFACE SEAL <u>Concrete Pad</u> THICKNESS OF SURFACE SEAL <u>4.0 in.</u>
	11.0	TYPE OF PROTECTIVE CASING <u>Steel</u> INSIDE DIAMETER <u>4.0 in.</u> TOTAL LENGTH <u>5.0 ft.</u>
	SILT WITH SAND (ML)	BOTTOM OF PROTECTIVE CASING EL. <u>---</u> DEPTH <u>---</u>
	50.0	TYPE OF WELL CASING OR RISER PIPE <u>Sch. 40 PVC</u> INSIDE DIAMETER <u>2.0 in.</u>
	NEAT CEMENT GROUT WITH 3% BENTONITE BY WEIGHT	APPROXIMATE DIAMETER OF BOREHOLE <u>10 in.</u>
	54.75 ft.	TOP OF WELL POINT EL. <u>608.11</u> DEPTH <u>61.79 ft.</u>
	BENTONITE	TYPE OF WELLPOINT <u>Stainless Steel</u> SCREEN GAUGE OR SIZE OF OPENINGS <u>0.010 in.</u> INSIDE DIAMETER <u>2.0 in.</u> TYPE OF BACKFILL AROUND POINT <u>FX-50 Silica Sand</u>
	57.5 ft.	BOTTOM OF WELL POINT EL. <u>592.90</u> DEPTH <u>77.0 ft.</u>
	SILT (ML)	BOTTOM OF BOREHOLE EL. <u>590.90</u> DEPTH <u>79.0 ft.</u>
	60.1 ft.	
75.0		
SAPROLITE (HIGHLY WEATHERED GNEISS)		
FOSTER-DIXIANA FX-50 SILICA SAND		

• FIGURES ABOVE REFER TO DEPTH IN FEET • ALL DEPTHS ARE REFERENCED TO GROUND SURFACE

63.87 ft.	+	15.21 ft.	=	79.08 ft.
LENGTH OF RISER PIPE		LENGTH OF POINT		TOTAL

BENTONITE SEALS 

**SIRRINE**ENVIRONMENTAL
CONSULTANTS**GROUND WATER MONITORING INSTALLATION DETAIL**

PROJECT: <u>MEDLEY FARM SITE R/FS</u>		JOB NO <u>G-8026</u>	
LOCATION: <u>GAFFNEY, SOUTH CAROLINA</u>		INSTALLATION NO <u>SW4</u>	
CLIENT: <u>MEDLEY FARM STEERING COMMITTEE</u>		TYPE OF INSTALLATION <u>SAPROLITE MONITORING WELL</u>	
CONTRACTOR: <u>ENVIRONMENTAL DRILLING & SERVICES</u>		BORING NO. <u>SW4</u>	
DRILLER: <u>D. G. FITZPATRICK</u> CERTIFICATION NO: <u>593</u>		LOCATION <u>SEE PLAN</u>	
SEC FIELD REPRESENTATIVE: <u>RICHARD L. BURDINE</u>		INSTALLATION DATE <u>7/12/89</u>	

SURVEY DATUM <u>N.G.V.D.</u>		TOP OF PROTECTIVE CASING (CAP OPEN) EL. <u>---</u> STICKUP <u>---</u>		
GROUND SURFACE ELEVATION: <u>668.68</u>		TOP OF WELL CASING OR RISER PIPE EL. <u>671.39</u> DEPTH <u>3.2 ft.</u>		
SUMMARIZE SOIL CONDITIONS, BACKFILL AND SEALS (NOT TO SCALE)	SILTY CLAY (ML) 7.0	NEAT CEMENT GROUT WITH 3% BENTONITE BY WEIGHT	TYPE OF SURFACE SEAL <u>Concrete Pad</u> THICKNESS OF SURFACE SEAL <u>4.0 in.</u>	
	SILT (ML)		TYPE OF PROTECTIVE CASING <u>Steel</u> INSIDE DIAMETER <u>4.0 in.</u> TOTAL LENGTH <u>5.0 ft.</u>	
	46.2 ft.	BOTTOM OF PROTECTIVE CASING EL. <u>---</u> DEPTH <u>---</u>		
	BENTONITE	TYPE OF WELL CASING OR RISER PIPE <u>Sch. 40 PVC</u> INSIDE DIAMETER <u>2.0 in.</u>		
	49.1 ft.	APPROXIMATE DIAMETER OF BOREHOLE <u>10 in.</u>		
	50.0	TOP OF WELL POINT EL. <u>615.58</u> DEPTH <u>53.1 ft.</u>		
	FOSTER DIXIANA FX-30 SILICA SAND	TYPE OF WELL POINT <u>Stainless Steel</u> SCREEN GAUGE OR SIZE OF OPENINGS <u>0.010 in.</u> INSIDE DIAMETER <u>2.0 in.</u> TYPE OF BACKFILL AROUND POINT <u>Foster-Dixiana FX-50</u>		
	55.0	BOTTOM OF WELL POINT EL. <u>600.38</u> DEPTH <u>68.3 ft.</u>		
	SILT (ML)	BOTTOM OF BOREHOLE EL. <u>598.18</u> DEPTH <u>70.5 ft.</u>		
	FOSTER-DIXIANA FX-50 SILICA SAND			

• FIGURES ABOVE REFER TO DEPTH IN FEET


• ALL DEPTHS ARE REFERENCED TO GROUND SURFACE

<u>56.3 ft.</u> LENGTH OF RISER PIPE	+	<u>15.2 ft.</u> LENGTH OF POINT	=	<u>71.5 ft.</u> TOTAL
BENTONITE SEALS				

GROUND WATER MONITORING INSTALLATION DETAIL

PROJECT: <u>MEDLEY FARM RI/FS PHASE II</u>		JOB NO <u>G-8026.00</u>
LOCATION: <u>GAFFNEY, SOUTH CAROLINA</u>		INSTALLATION NO <u>SW101</u>
CLIENT: <u>MEDLEY FARM STEERING COMMITTEE</u>		TYPE OF INSTALLATION <u>SAPROLITE MONITORING WELL</u>
CONTRACTOR: <u>ATLANTA TESTING & ENGINEERING</u>		BORING NO. <u>HP101</u>
DRILLER: <u>KEVIN WARREN</u> CERTIFICATION NO: <u>750 (SC)</u>		LOCATION <u>SEE PLAN</u>
SEC FIELD REPRESENTATIVE: <u>ROB ENRIGHT</u>		INSTALLATION DATE <u>8/28/90</u>


SURVEY DATUM <u>N.G.V.D.</u>		TOP OF PROTECTIVE CASING (CAP OPEN) EL. <u>604.18</u> STICKUP <u>3.0 ft.</u>
GROUND SURFACE ELEVATION: <u>601.15</u>		TOP OF WELL CASING OR RISER PIPE EL. <u>604.18</u> DEPTH <u>3.0 ft.</u>
SUMMARIZE SOIL CONDITIONS, BACKFILL AND SEALS (NOT TO SCALE)	<p>Silt (ML)</p> <p>Neat Cement Grout/ 3% Bentonite by Weight</p> <p>14.4 ft.</p> <p>Bentonite</p> <p>17.9 ft.</p> <p>27.0 ft.</p> <p>Well Graded Gravel (GW) (Saprolite)</p> <p>Silica Sand BX-30</p>	TYPE OF SURFACE SEAL <u>Concrete Pad</u> THICKNESS OF SURFACE SEAL <u>4.0 in.</u>
		TYPE OF PROTECTIVE CASING <u>Lockable Steel</u> INSIDE DIAMETER <u>4.0 in.</u> TOTAL LENGTH <u>5.0 ft.</u>
		BOTTOM OF PROTECTIVE CASING EL. <u>599.3</u> DEPTH <u>1.7 ft.</u>
		TYPE OF WELL CASING OR RISER PIPE <u>Sch. 40 PVC</u> INSIDE DIAMETER <u>2.0 in.</u>
		APPROXIMATE DIAMETER OF BOREHOLE <u>8 in.</u>
		TOP OF WELL POINT EL. <u>577.3</u> DEPTH <u>23.85 ft.</u>
		TYPE OF WELLPOINT <u>Stainless Steel</u> SCREEN GAUGE OR SIZE OF OPENINGS <u>0.010 in.</u> INSIDE DIAMETER <u>2.0 in.</u> TYPE OF BACKFILL AROUND POINT <u>BX-30 Silica Sand</u>
		BOTTOM OF WELL POINT EL. <u>567.3</u> DEPTH <u>33.85 ft.</u>
		BOTTOM OF BOREHOLE EL. <u>566.85</u> DEPTH <u>34.30 ft.</u>
		<p>• FIGURES ABOVE REFER TO DEPTH IN FEET</p> <p>• ALL DEPTHS ARE REFERENCED TO GROUND SURFACE</p>

<p>26.85 ft.</p> <p>LENGTH OF RISER PIPE</p>	+	<p>10.00 ft.</p> <p>LENGTH OF WELL POINT</p>	=	<p>36.85 ft.</p> <p>TOTAL</p>	<p>BENTONITE SEALS</p> 
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GROUND WATER MONITORING INSTALLATION DETAIL

PROJECT: <u>MEDLEY FARM R/FS PHASE II</u>		JOB NO <u>G-8026.00</u>
LOCATION: <u>GAFFNEY, SOUTH CAROLINA</u>		INSTALLATION NO <u>SW102</u>
CLIENT: <u>MEDLEY FARM STEERING COMMITTEE</u>		TYPE OF INSTALLATION <u>SAPROLITE MONITORING WELL</u>
CONTRACTOR: <u>ATLANTA TESTING & ENGINEERING</u>		BORING NO. <u>HP102</u>
DRILLER: <u>PAT BERGMAN</u> CERTIFICATION NO: <u>768 (SC)</u>		LOCATION <u>SEE PLAN</u>
SEC FIELD REPRESENTATIVE: <u>JOE HARRIGAN</u>		INSTALLATION DATE <u>8/23/90</u>

SURVEY DATUM <u>N.G.V.D.</u>		TOP OF PROTECTIVE CASING (CAP OPEN) EL. <u>620.05</u> STICKUP <u>2.62 ft.</u>
GROUND SURFACE ELEVATION: <u>617.43</u>		TOP OF WELL CASING OR RISER PIPE EL. <u>620.07</u> DEPTH <u>2.64 ft.</u>
SUMMARIZE SOIL CONDITIONS, BACKFILL AND SEALS (NOT TO SCALE)	Silty Clay (CL) 6.0 ft.	TYPE OF SURFACE SEAL <u>Concrete Pad</u> THICKNESS OF SURFACE SEAL <u>4.0 in.</u>
	Silt (ML) 19.0 ft.	TYPE OF PROTECTIVE CASING <u>Lockable Steel</u> INSIDE DIAMETER <u>4.0 in.</u> TOTAL LENGTH <u>5.0 ft.</u>
	Neat Cement Grout/ 3% Bentonite by Weight	BOTTOM OF PROTECTIVE CASING EL. <u>615.05</u> DEPTH <u>2.38 ft.</u>
	24.35 ft.	TYPE OF WELL CASING OR RISER PIPE <u>Sch. 40 PVC</u> INSIDE DIAMETER <u>2.0 in.</u>
	Bentonite Pellets	APPROXIMATE DIAMETER OF BOREHOLE <u>10 in.</u>
	26.8 ft.	TOP OF WELL POINT EL. <u>583.85</u> DEPTH <u>33.58 ft.</u>
	Silica Sand (BX-30) 29.6 ft.	TYPE OF WELLPOINT <u>Stainless Steel</u> SCREEN GAUGE OR SIZE OF OPENINGS <u>0.010 in.</u> INSIDE DIAMETER <u>2.0 in.</u> TYPE OF BACKFILL AROUND POINT <u>FX-50 Silica Sand</u>
	Silt (ML) Saprolite	BOTTOM OF WELL POINT EL. <u>568.85</u> DEPTH <u>48.58 ft.</u>
	Silica Sand (FX-50)	BOTTOM OF BOREHOLE EL. <u>567.43</u> DEPTH <u>50.0 ft.</u>
	<p>• FIGURES ABOVE REFER TO DEPTH IN FEET</p> <p>• ALL DEPTHS ARE REFERENCED TO GROUND SURFACE</p>	

36.22 ft.	+	15.0 ft.	=	51.22 ft.	BENTONITE SEALS 
LENGTH OF RISER PIPE		LENGTH OF WELL POINT		TOTAL	

GROUND WATER MONITORING INSTALLATION DETAIL


PROJECT: <u>MEDLEY FARM R/F/S PHASE II</u>		JOB NO. <u>G-8026.00</u>
LOCATION: <u>GAFFNEY, SOUTH CAROLINA</u>		INSTALLATION NO. <u>SW103</u>
CLIENT: <u>MEDLEY FARM STEERING COMMITTEE</u>		TYPE OF INSTALLATION <u>SAPROLITE MONITORING WELL</u>
CONTRACTOR: <u>ATLANTA TESTING & ENGINEERING</u>		BORING NO. <u>HP103</u>
DRILLER: <u>KEVIN WARREN</u>	CERTIFICATION NO: <u>750 (SC)</u>	LOCATION <u>SEE PLAN</u>
SEC FIELD REPRESENTATIVE: <u>RICHARD BURDINE</u>		INSTALLATION DATE <u>8/16/90</u>

SURVEY DATUM <u>N.G.V.D.</u>		TOP OF PROTECTIVE CASING (CAP OPEN) EL. <u>635.76</u> STICKUP <u>2.36 ft.</u>
GROUND SURFACE ELEVATION: <u>633.40</u>		TOP OF WELL CASING OR RISER PIPE EL. <u>635.68</u> DEPTH <u>2.28 ft.</u>
SUMMARIZE SOIL CONDITIONS, BACKFILL AND SEALS (NOT TO SCALE)	<p>Clayey Silt (ML) (Saprolite)</p> <p>Neat Cement Grout/ 3% Bentonite by Weight</p> <p>23.0 ft.</p> <p>Bentonite</p> <p>25.9 ft.</p> <p>Silica Sand (FX-50)</p>	TYPE OF SURFACE SEAL <u>Concrete Pad</u> THICKNESS OF SURFACE SEAL <u>4.0 in.</u>
		TYPE OF PROTECTIVE CASING <u>Lockable Steel</u> INSIDE DIAMETER <u>4.0 in.</u> TOTAL LENGTH <u>5.0 ft.</u>
		BOTTOM OF PROTECTIVE CASING EL. <u>631.03</u> DEPTH <u>2.37 ft.</u>
		TYPE OF WELL CASING OR RISER PIPE <u>Sch. 40 PVC</u> INSIDE DIAMETER <u>2.0 in.</u>
		APPROXIMATE DIAMETER OF BOREHOLE <u>8 in.</u>
		TOP OF WELL POINT EL. <u>603.68</u> DEPTH <u>29.72 ft.</u>
		TYPE OF WELLPOINT <u>Stainless Steel</u> SCREEN GAUGE OR SIZE OF OPENINGS <u>0.010 in.</u> INSIDE DIAMETER <u>2.0 in.</u> TYPE OF BACKFILL AROUND POINT <u>FX-50 Silica Sand</u>
		BOTTOM OF WELL POINT EL. <u>588.40</u> DEPTH <u>45.0 ft.</u>
		BOTTOM OF BOREHOLE EL. <u>583.70</u> DEPTH <u>49.7 ft.</u>
		<p>FIGURES ABOVE REFER TO DEPTH IN FEET</p> <p>ALL DEPTHS ARE REFERENCED TO GROUND SURFACE</p>

<p>32.00 ft. LENGTH OF RISER PIPE</p>	+	<p>15.28 ft. LENGTH OF WELL POINT</p>	=	<p>47.28 ft. TOTAL</p>	<p>BENTONITE SEALS</p>
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GROUND WATER MONITORING INSTALLATION DETAIL

PROJECT: <u>MEDLEY FARM RI/FS PHASE II</u>		JOB NO <u>G-8026.00</u>
LOCATION: <u>GAFFNEY, SOUTH CAROLINA</u>		INSTALLATION NO <u>SW104</u>
CLIENT: <u>MEDLEY FARM STEERING COMMITTEE</u>		TYPE OF INSTALLATION <u>SAPROLITE MONITORING WELL</u>
CONTRACTOR: <u>ATLANTA TESTING & ENGINEERING</u>		BORING NO. <u>HP104</u>
DRILLER: <u>KEVIN WARREN</u>	CERTIFICATION NO: <u>750 (SC)</u>	LOCATION <u>SEE PLAN</u>
SEC FIELD REPRESENTATIVE: <u>RICHARD BURDINE</u>		INSTALLATION DATE <u>8/17 - 8/20/90</u>

SURVEY DATUM <u>N.G.V.D.</u>		TOP OF PROTECTIVE CASING (CAP OPEN) EL. <u>649.87</u> STICKUP <u>2.41 ft.</u>
GROUND SURFACE ELEVATION: <u>647.46</u>		TOP OF WELL CASING OR RISER PIPE EL. <u>649.85</u> DEPTH <u>2.39 ft.</u>
SUMMARIZE SOIL CONDITIONS, BACKFILL AND SEALS (NOT TO SCALE)	<p>Silt (ML)</p> <p>Neat Cement Grout with 3% Bentonite by Weight</p> <p>14.33 ft. Bentonite</p> <p>16.83 ft. Silica Sand (BX-30)</p> <p>18.25 ft.</p> <p>27.0 ft.</p> <p>Silica Sand (FX-50)</p> <p>Sandy Silt (ML)</p>	<p>TYPE OF SURFACE SEAL <u>Concrete Pad</u></p> <p>THICKNESS OF SURFACE SEAL <u>4.0 in.</u></p>
		<p>TYPE OF PROTECTIVE CASING <u>Lockable Steel</u></p> <p>INSIDE DIAMETER <u>4.0 in.</u></p> <p>TOTAL LENGTH <u>5.0 ft.</u></p>
		<p>BOTTOM OF PROTECTIVE CASING EL. <u>644.87</u> DEPTH <u>2.59 ft.</u></p>
		<p>TYPE OF WELL CASING OR RISER PIPE <u>Sch. 40 PVC</u></p> <p>INSIDE DIAMETER <u>2.0 in.</u></p>
		<p>APPROXIMATE DIAMETER OF BOREHOLE <u>8 in.</u></p>
		<p>TOP OF WELL POINT EL. <u>627.66</u> DEPTH <u>19.80 ft.</u></p>
		<p>TYPE OF WELLPOINT <u>Stainless Steel</u></p> <p>SCREEN GAUGE OR SIZE OF OPENINGS <u>0.010 in.</u></p> <p>INSIDE DIAMETER <u>2.0 in.</u></p> <p>TYPE OF BACKFILL AROUND POINT <u>FX-50 Silica Sand</u></p>
		<p>BOTTOM OF WELL POINT EL. <u>612.46</u> DEPTH <u>35.0 ft.</u></p>
		<p>BOTTOM OF BOREHOLE EL. <u>607.96</u> DEPTH <u>39.5 ft.</u></p>
		<p>• FIGURES ABOVE REFER TO DEPTH IN FEET • ALL DEPTHS ARE REFERENCED TO GROUND SURFACE</p>
<p>22.19 ft. + 15.2 ft. = 37.39 ft.</p> <p>LENGTH OF RISER PIPE LENGTH OF WELL POINT TOTAL</p>		<p>BENTONITE SEALS </p>

GROUND WATER MONITORING INSTALLATION DETAIL

PROJECT: <u>MEDLEY FARM RVFS PHASE II</u>		JOB NO <u>G-8026.00</u>
LOCATION: <u>GAFFNEY, SOUTH CAROLINA</u>		INSTALLATION NO <u>SW106</u>
CLIENT: <u>MEDLEY FARM STEERING COMMITTEE</u>		TYPE OF INSTALLATION <u>SAPROLITE MONITORING WELL</u>
CONTRACTOR: <u>ATLANTA TESTING & ENGINEERING</u>		BORING NO. <u>SW106</u>
DRILLER: <u>KEVIN WARREN</u> CERTIFICATION NO: <u>750 (SC)</u>		LOCATION <u>SEE PLAN</u>
SEC FIELD REPRESENTATIVE: <u>ROB ENRIGHT</u>		INSTALLATION DATE <u>8/29/90</u>


SURVEY DATUM <u>N.G.V.D.</u>		TOP OF PROTECTIVE CASING (CAP OPEN) EL. <u>596.13</u> STICKUP <u>3.22 ft.</u>
GROUND SURFACE ELEVATION: <u>592.91</u>		TOP OF WELL CASING OR RISER PIPE EL. <u>596.12</u> DEPTH <u>3.21 ft.</u>
SUMMARIZE SOIL CONDITIONS, BACKFILL AND SEALS (NOT TO SCALE)	<p>Silt (ML)</p> <p>Neat Cement Grout/ 3% Bentonite by Weight</p> <p>2.0 ft.</p> <p>Bentonite</p> <p>4.0 ft.</p> <p>11.0 ft.</p> <p>Poorly Graded Sand (SP-SC) (Saprolite)</p> <p>Silica Sand BX-30</p>	TYPE OF SURFACE SEAL <u>Concrete Pad</u> THICKNESS OF SURFACE SEAL <u>2.33 ft.</u>
		TYPE OF PROTECTIVE CASING <u>Lockable Steel</u> INSIDE DIAMETER <u>4.0 in.</u> TOTAL LENGTH <u>5.0 ft.</u>
		BOTTOM OF PROTECTIVE CASING EL. <u>591.13</u> DEPTH <u>1.78 ft.</u>
		TYPE OF WELL CASING OR RISER PIPE <u>Sch. 40 PVC</u> INSIDE DIAMETER <u>2.0 in.</u>
		APPROXIMATE DIAMETER OF BOREHOLE <u>8 in.</u>
		TOP OF WELL POINT EL. <u>587.09</u> DEPTH <u>5.82 ft.</u>
		TYPE OF WELL POINT <u>Stainless Steel</u> SCREEN GAUGE OR SIZE OF OPENINGS <u>0.010 in.</u> INSIDE DIAMETER <u>2.0 in.</u> TYPE OF BACKFILL AROUND POINT <u>BX-30 Silica Sand</u>
		BOTTOM OF WELL POINT EL. <u>571.91</u> DEPTH <u>21.00 ft.</u>
		BOTTOM OF BOREHOLE EL. <u>568.91</u> DEPTH <u>24.00 ft.</u>
		<p>• FIGURES ABOVE REFER TO DEPTH IN FEET</p> <p>• ALL DEPTHS ARE REFERENCED TO GROUND SURFACE</p>
<p>9.03 ft. + 15.18 ft. = 24.21 ft.</p> <p>LENGTH OF RISER PIPE + LENGTH OF WELL POINT = TOTAL</p>		<p>BENTONITE SEALS</p> 

GROUND WATER MONITORING INSTALLATION DETAIL

PROJECT: <u>MEDLEY FARM R/FS PHASE II</u>		JOB NO <u>G-8026.00</u>
LOCATION: <u>GAFFNEY, SOUTH CAROLINA</u>		INSTALLATION NO <u>SW108</u>
CLIENT: <u>MEDLEY FARM STEERING COMMITTEE</u>		TYPE OF INSTALLATION <u>MONITORING WELL</u>
CONTRACTOR: <u>ATLANTA TESTING & ENGINEERING</u>		BORING NO. <u>SW108</u>
DRILLER: <u>KEVIN WARREN</u> CERTIFICATION NO: <u>750 (SC)</u>		LOCATION <u>SEE PLAN</u>
SEC FIELD REPRESENTATIVE: <u>JOE HARRIGAN</u>		INSTALLATION DATE <u>8/30/90</u>

SURVEY DATUM <u>N.G.V.D.</u>		TOP OF PROTECTIVE CASING (CAP OPEN) EL. <u>605.32</u> STICKUP <u>2.47 ft.</u>
GROUND SURFACE ELEVATION: <u>602.85</u>		TOP OF WELL CASING OR RISER PIPE EL. <u>605.28</u> DEPTH <u>2.43 ft.</u>
SUMMARIZE SOIL CONDITIONS, BACKFILL AND SEALS (NOT TO SCALE)	Neat Cement Grout/ 3% Bentonite by Weight	TYPE OF SURFACE SEAL <u>Concrete Pad</u> THICKNESS OF SURFACE SEAL <u>4.0 in.</u>
		TYPE OF PROTECTIVE CASING <u>Lockable Steel</u> INSIDE DIAMETER <u>4.0 in.</u> TOTAL LENGTH <u>3.47 ft.</u>
	1.0	BOTTOM OF PROTECTIVE CASING EL. <u>601.85</u> DEPTH <u>1.0 ft.</u>
	Bentonite	TYPE OF WELL CASING OR RISER PIPE <u>Sch. 40 PVC</u> INSIDE DIAMETER <u>2.0 in.</u>
		APPROXIMATE DIAMETER OF BOREHOLE <u>10 in.</u>
	12.0 ft.	TOP OF WELL POINT EL. <u>598.72</u> DEPTH <u>4.13 ft.</u>
		TYPE OF WELLPOINT <u>Stainless Steel</u> SCREEN GAUGE OR SIZE OF OPENINGS <u>0.010 in.</u> INSIDE DIAMETER <u>2.0 in.</u> TYPE OF BACKFILL AROUND POINT <u>BX-30 Silica Sand</u>
		BOTTOM OF WELL POINT EL. <u>583.66</u> DEPTH <u>19.19 ft.</u>
		BOTTOM OF BOREHOLE EL. <u>582.85</u> DEPTH <u>20.0 ft.</u>
	Silt (ML)	
Silica Sand (BX-30)		
Silt (ML) Saprolite		


• FIGURES ABOVE REFER TO DEPTH IN FEET • ALL DEPTHS ARE REFERENCED TO GROUND SURFACE

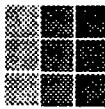
6.56 ft. LENGTH OF RISER PIPE	+	15.06 ft. LENGTH OF WELL POINT	=	21.62 ft. TOTAL	BENTONITE SEALS 
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GROUND WATER MONITORING INSTALLATION DETAIL

PROJECT: <u>MEDLEY FARM RVFS PHASE II</u>		JOB NO <u>G-8026.00</u>
LOCATION: <u>GAFFNEY, SOUTH CAROLINA</u>		INSTALLATION NO <u>SW109</u>
CLIENT: <u>MEDLEY FARM STEERING COMMITTEE</u>		TYPE OF INSTALLATION <u>SAPROLITE MONITORING WELL</u>
CONTRACTOR: <u>ATLANTA TESTING & ENGINEERING</u>		BORING NO. <u>SW109</u>
DRILLER: <u>PAT BERGMAN</u> CERTIFICATION NO: <u>768 (SC)</u>		LOCATION <u>SEE PLAN</u>
SEC FIELD REPRESENTATIVE: <u>RICHARD BURDINE</u>		INSTALLATION DATE <u>9/14/90</u>

SURVEY DATUM <u>N.G.V.D.</u>		TOP OF PROTECTIVE CASING (CAP OPEN) EL. <u>661.39</u> STICKUP <u>2.74 ft.</u>
GROUND SURFACE ELEVATION: <u>658.65</u>		TOP OF WELL CASING OR RISER PIPE EL. <u>661.26</u> DEPTH <u>2.61 ft.</u>
SUMMARIZE SOIL CONDITIONS, BACKFILL AND SEALS (NOT TO SCALE)	<p>Neat Cement Grout/ 3% Bentonite by Weight</p> <p>37.0 ft. Bentonite</p> <p>40.0 ft. Silica Sand BX-30</p> <p>Silt (ML) Saprolite</p>	TYPE OF SURFACE SEAL <u>Concrete Pad</u> THICKNESS OF SURFACE SEAL <u>4.0 in.</u>
		TYPE OF PROTECTIVE CASING <u>Lockable Steel</u> INSIDE DIAMETER <u>4.0 in.</u> TOTAL LENGTH <u>5.0 ft.</u>
		BOTTOM OF PROTECTIVE CASING EL. <u>656.39</u> DEPTH <u>2.26 ft.</u>
		TYPE OF WELL CASING OR RISER PIPE <u>Sch. 40 PVC</u> INSIDE DIAMETER <u>2.0 in.</u>
		APPROXIMATE DIAMETER OF BOREHOLE <u>8 in.</u>
		TOP OF WELL POINT EL. <u>613.85</u> DEPTH <u>44.8 ft.</u>
		TYPE OF WELLPOINT <u>Stainless Steel</u> SCREEN GAUGE OR SIZE OF OPENINGS <u>0.010 in.</u> INSIDE DIAMETER <u>2.0 in.</u> TYPE OF BACKFILL AROUND POINT <u>BX-30 Silica Sand</u>
		BOTTOM OF WELL POINT EL. <u>598.65</u> DEPTH <u>60.0 ft.</u>
		BOTTOM OF BOREHOLE EL. <u>594.45</u> DEPTH <u>64.2 ft.</u>
		<p>• FIGURES ABOVE REFER TO DEPTH IN FEET</p> <p>• ALL DEPTHS ARE REFERENCED TO GROUND SURFACE</p>


47.41 ft.	+	15.2 ft.	=	62.61 ft.	BENTONITE SEALS 
LENGTH OF RISER PIPE		LENGTH OF WELL POINT		TOTAL	

**SIRRINE**ENVIRONMENTAL
CONSULTANTS**GROUND WATER MONITORING INSTALLATION DETAIL**

PROJECT: <u>MEDLEY FARM SITE R/FS</u>		JOB NO <u>G-8026</u>
LOCATION: <u>GAFFNEY, SOUTH CAROLINA</u>		INSTALLATION NO <u>PZ1</u>
CLIENT: <u>MEDLEY FARM STEERING COMMITTEE</u>		TYPE OF INSTALLATION <u>TEMPORARY PIEZOMETER</u>
CONTRACTOR: <u>ENVIRONMENTAL DRILLING & SERVICES</u>		BORING NO. <u>PZ1</u>
DRILLER: <u>D. G. FITZPATRICK</u> CERTIFICATION NO: <u>593</u>		LOCATION <u>SEE PLAN</u>
SEC FIELD REPRESENTATIVE: <u>R. J. HUNT</u>		INSTALLATION DATE <u>7/24/89</u>

SURVEY DATUM <u>N.G.V.D.</u>		TOP OF PROTECTIVE CASING (CAP OPEN) EL. <u>575.41</u> STICKUP <u>2.0 ft.</u>
GROUND SURFACE ELEVATION: <u>573.41</u>		TOP OF WELL CASING OR RISER PIPE EL. <u>575.41</u> DEPTH <u>2.0 ft.</u>
SUMMARIZE SOIL CONDITIONS, BACKFILL AND SEALS (NOT TO SCALE)	WELL GRADED SAND (SW) 1.5 ft.	TYPE OF SURFACE SEAL <u>Concrete Pad</u>
		THICKNESS OF SURFACE SEAL <u>4.0 in.</u>
	BENTONITE PELLETS	TYPE OF PROTECTIVE CASING <u>Lockable Steel</u>
		INSIDE DIAMETER <u>4.0 in.</u>
	8.0 ft.	TOTAL LENGTH <u>2.5 ft.</u>
		BOTTOM OF PROTECTIVE CASING EL. <u>572.91</u> DEPTH <u>0.5 ft.</u>
	SILT (ML) 8.0 ft.	TYPE OF WELL CASING OR RISER PIPE <u>Sch. 40 PVC</u>
		INSIDE DIAMETER <u>2.0 in.</u>
	FX-50 QUARTZ SAND	APPROXIMATE DIAMETER OF BOREHOLE <u>7.0 in.</u>
		TOP OF WELL POINT EL. <u>570.41</u> DEPTH <u>3.0 ft.</u>
	TYPE OF WELLPOINT <u>Sch. 40 PVC</u>	
	SCREEN GAUGE OR SIZE OF OPENINGS <u>0.010 in.</u>	
	INSIDE DIAMETER <u>2.0 in.</u>	
	TYPE OF BACKFILL AROUND POINT <u>FX-50 Sand</u>	
	BOTTOM OF WELL POINT EL. <u>560.30</u> DEPTH <u>13.11 ft.</u>	
	BOTTOM OF BOREHOLE EL. <u>558.41</u> DEPTH <u>15.0 ft.</u>	


• FIGURES ABOVE REFER TO DEPTH IN FEET • ALL DEPTHS ARE REFERENCED TO GROUND SURFACE

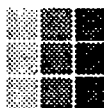
5.0 ft.	+	10.11 ft.	=	15.11 ft.	BENTONITE SEALS 
LENGTH OF RISER PIPE		LENGTH OF POINT		TOTAL	

GROUND WATER MONITORING INSTALLATION DETAIL

PROJECT: <u>MEDLEY FARM RI/FS PHASE II</u>		JOB NO. <u>G-8026.00</u>
LOCATION: <u>GAFFNEY, SOUTH CAROLINA</u>		INSTALLATION NO. <u>PZ101</u>
CLIENT: <u>MEDLEY FARM STEERING COMMITTEE</u>		TYPE OF INSTALLATION <u>PIEZOMETER</u>
CONTRACTOR: <u>ATLANTA TESTING & ENGINEERING</u>		BORING NO. <u>PZ101</u>
DRILLER: <u>PAT BERGMAN</u> CERTIFICATION NO: <u>768 (SC)</u>		LOCATION <u>SEE PLAN</u>
SEC FIELD REPRESENTATIVE: <u>ROB ENRIGHT</u>		INSTALLATION DATE <u>8/16/90</u>

SURVEY DATUM <u>N.G.V.D.</u>		TOP OF PROTECTIVE CASING (CAP OPEN) EL. <u>688.71</u> STICKUP <u>2.67 ft.</u>
GROUND SURFACE ELEVATION: <u>686.04</u>		TOP OF WELL CASING OR RISER PIPE EL. <u>688.49</u> DEPTH <u>2.45 ft.</u>
SUMMARIZE SOIL CONDITIONS, BACKFILL AND SEALS (NOT TO SCALE)	Silt (ML) 4.6 ft.	TYPE OF SURFACE SEAL <u>Concrete Pad</u> THICKNESS OF SURFACE SEAL <u>4.0 in.</u>
		TYPE OF PROTECTIVE CASING <u>Lockable Steel</u> INSIDE DIAMETER <u>4.0 in.</u> TOTAL LENGTH <u>5.0 ft.</u>
	Neat Cement Grout/ 3% Bentonite by Weight	BOTTOM OF PROTECTIVE CASING EL. <u>683.71</u> DEPTH <u>2.33 ft.</u>
		TYPE OF WELL CASING OR RISER PIPE <u>Sch. 40 PVC</u> INSIDE DIAMETER <u>1.0 in.</u>
	Bentonite	APPROXIMATE DIAMETER OF BOREHOLE <u>10 in.</u>
	Clayey Silt (CL)	TOP OF WELL POINT EL. <u>641.94</u> DEPTH <u>44.1 ft.</u>
		TYPE OF WELLPOINT <u>Sch. 40 PVC</u> SCREEN GAUGE OR SIZE OF OPENINGS <u>0.010 in.</u> INSIDE DIAMETER <u>1.0 in.</u> TYPE OF BACKFILL AROUND POINT <u>FX-50 Silica Sand</u>
	Silica Sand (FX-50)	BOTTOM OF WELL POINT EL. <u>627.04</u> DEPTH <u>59.0 ft.</u>
		BOTTOM OF BOREHOLE EL. <u>625.04</u> DEPTH <u>61.0 ft.</u>
	• FIGURES ABOVE REFER TO DEPTH IN FEET • ALL DEPTHS ARE REFERENCED TO GROUND SURFACE	

$\frac{46.55 \text{ ft.}}{\text{LENGTH OF RISER PIPE}} + \frac{14.9 \text{ ft.}}{\text{LENGTH OF WELL POINT}} = \frac{61.45 \text{ ft.}}{\text{TOTAL}}$	BENTONITE SEALS 
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**SIRRINE**ENVIRONMENTAL
CONSULTANTS**GROUND WATER MONITORING INSTALLATION DETAIL**PROJECT: MEDLEY FARM SITE R/FSJOB NO G-8026LOCATION: GAFFNEY, SOUTH CAROLINAINSTALLATION NO BW1CLIENT: MEDLEY FARM STEERING COMMITTEETYPE OF INSTALLATION BEDROCK
MONITORING WELLCONTRACTOR: ENVIRONMENTAL DRILLING & SERVICESBORING NO. BW1DRILLER: D. G. FITZPATRICK CERTIFICATION NO: 593LOCATION SEE PLANSEC FIELD REPRESENTATIVE: RICHARD L. BURDINEINSTALLATION DATE 6/8/89

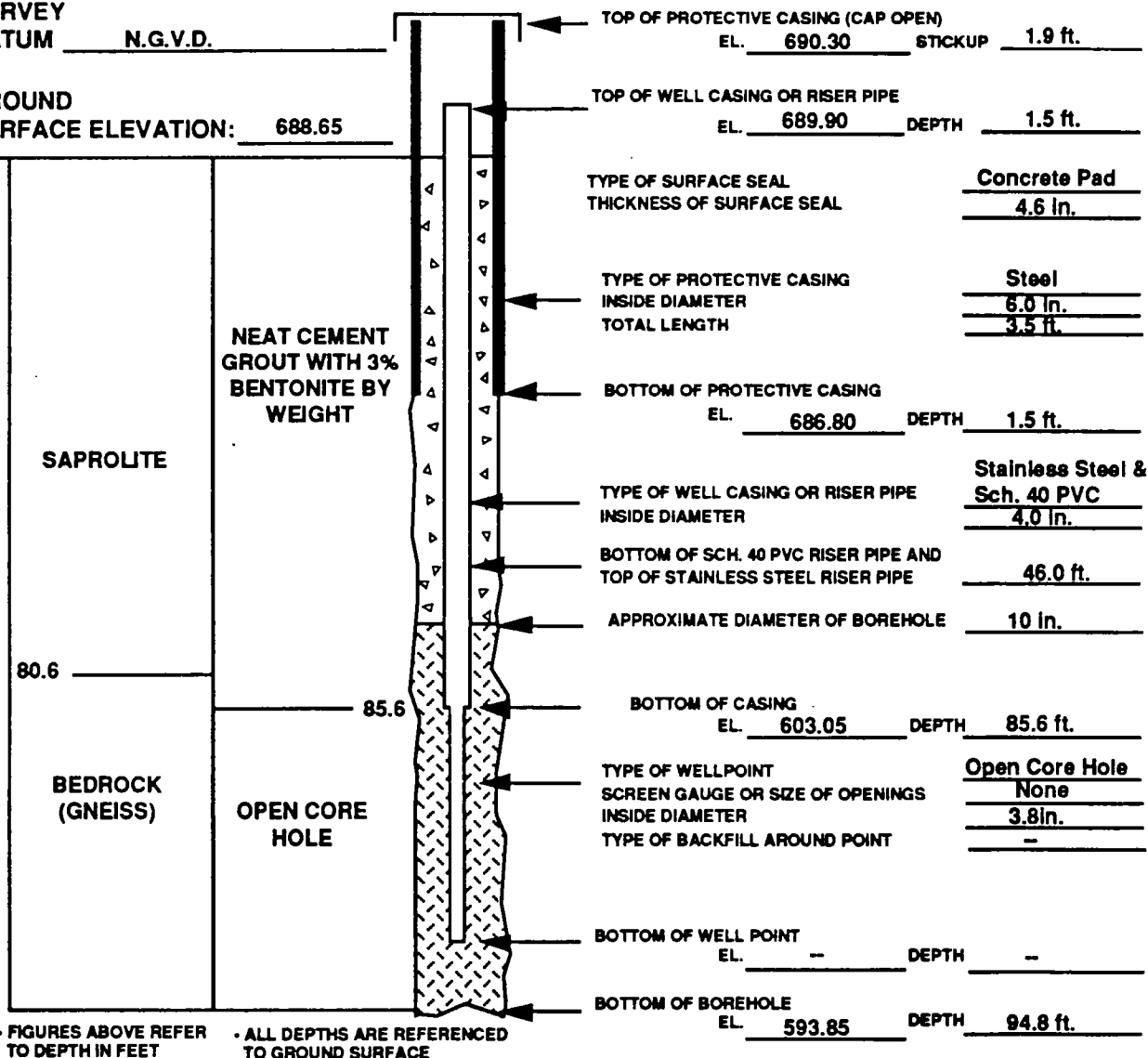
SURVEY

DATUM N.G.V.D.

GROUND

SURFACE ELEVATION: 688.65

SUMMARIZE SOIL CONDITIONS, BACKFILL AND SEALS (NOT TO SCALE)



85.6 ft.
LENGTH OF CASING

+

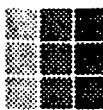
9.2 ft.
LENGTH OF CORE HOLE

=

94.8 ft.
TOTAL

BENTONITE SEALS





SIRRINE
ENVIRONMENTAL
CONSULTANTS

GROUND WATER MONITORING INSTALLATION DETAIL

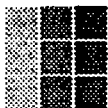
PROJECT: <u>MEDLEY FARM SITE R/VFS</u>		JOB NO <u>G-8026</u>	
LOCATION: <u>GAFFNEY, SOUTH CAROLINA</u>		INSTALLATION NO <u>BW2</u>	
CLIENT: <u>MEDLEY FARM STEERING COMMITTEE</u>		TYPE OF INSTALLATION <u>BEDROCK MONITORING WELL</u>	
CONTRACTOR: <u>ENVIRONMENTAL DRILLING & SERVICES</u>		BORING NO. <u>BW2</u>	
DRILLER: <u>D. G. FITZPATRICK</u> CERTIFICATION NO: <u>593</u>		LOCATION <u>SEE PLAN</u>	
SEC FIELD REPRESENTATIVE: <u>R. J. HUNT</u>		INSTALLATION DATE <u>7/24/89</u>	

SURVEY DATUM <u>N.G.V.D.</u>		TOP OF PROTECTIVE CASING (CAP OPEN) EL. <u>—</u> STICKUP <u>—</u>	
GROUND SURFACE ELEVATION: <u>661.26</u>		TOP OF WELL CASING OR RISER PIPE EL. <u>662.99</u> DEPTH <u>1.42 ft.</u>	

SUMMARIZE SOIL CONDITIONS, BACKFILL AND SEALS (NOT TO SCALE)	NEAT CEMENT GROUT WITH 3% BENTONITE BY WEIGHT	TYPE OF SURFACE SEAL THICKNESS OF SURFACE SEAL	Neat Cement Grout <u>65.0 ft.</u>
	SAPROLITE	TYPE OF PROTECTIVE CASING INSIDE DIAMETER TOTAL LENGTH	Steel <u>6.0 in.</u> <u>5.0 ft.</u>
	60.0	BOTTOM OF PROTECTIVE CASING EL. <u>—</u> DEPTH <u>—</u>	TYPE OF WELL CASING OR RISER PIPE INSIDE DIAMETER
	65.0	BOTTOM OF SCH. 40 PVC RISER PIPE AND TOP OF STAINLESS STEEL RISER PIPE	Stainless Steel & Sch. 40 PVC <u>4.0 in.</u>
	BEDROCK (FRACTURED MICA SCHIST)	APPROXIMATE DIAMETER OF BOREHOLE	<u>54.3 ft.</u> <u>10 in.</u>
	OPEN CORE HOLE	BOTTOM OF CASING EL. <u>596.90</u> DEPTH <u>64.36 ft.</u>	TYPE OF WELLPOINT SCREEN GAUGE OR SIZE OF OPENINGS INSIDE DIAMETER
	65.0	TYPE OF BACKFILL AROUND POINT	Open Core Hole None <u>3.8 in.</u> <u>—</u>
	65.0	BOTTOM OF WELL POINT EL. <u>—</u> DEPTH <u>—</u>	BOTTOM OF BOREHOLE EL. <u>576.26</u> DEPTH <u>85.0 ft.</u>
	65.0	FIGURES ABOVE REFER TO DEPTH IN FEET	
	ALL DEPTHS ARE REFERENCED TO GROUND SURFACE		BENTONITE SEALS

65.78 ft. LENGTH OF CASING	+	20.0 ft. LENGTH OF CORE HOLE	=	85.78 ft. TOTAL
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Note: Due to corehole instability 2 inch stainless steel screen and riser were installed inside the corehole with PVC riser pipe to the surface. A sanitary seal was used around the 2 inch to seal the space between the 2-4 inch casing.

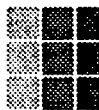
**SIRRINE**ENVIRONMENTAL
CONSULTANTS**GROUND WATER MONITORING INSTALLATION DETAIL**

PROJECT: <u>MEDLEY FARM SITE R/V/S</u>		JOB NO <u>G-8026</u>
LOCATION: <u>GAFFNEY, SOUTH CAROLINA</u>		INSTALLATION NO <u>BW3</u>
CLIENT: <u>MEDLEY FARM STEERING COMMITTEE</u>		TYPE OF INSTALLATION <u>BEDROCK MONITORING WELL</u>
CONTRACTOR: <u>ENVIRONMENTAL DRILLING & SERVICES</u>		BORING NO. <u>BW3</u>
DRILLER: <u>D. G. FITZPATRICK</u> CERTIFICATION NO: <u>593</u>		LOCATION <u>SEE PLAN</u>
SEC FIELD REPRESENTATIVE: <u>RICHARD L. BURDINE</u>		INSTALLATION DATE <u>7/18/89</u>

SURVEY DATUM <u>N.G.V.D.</u>		TOP OF PROTECTIVE CASING (CAP OPEN) EL. <u>--</u> STICKUP <u>--</u>
GROUND SURFACE ELEVATION: <u>573.44</u>		TOP OF WELL CASING OR RISER PIPE EL. <u>574.82</u> DEPTH <u>1.75 ft.</u>
SUMMARIZE SOIL CONDITIONS, BACKFILL AND SEALS (NOT TO SCALE)	SAPROLITE	TYPE OF SURFACE SEAL <u>Concrete Pad</u>
		THICKNESS OF SURFACE SEAL <u>4.0 in.</u>
	NEAT CEMENT GROUT WITH 3% BENTONITE BY WEIGHT	TYPE OF PROTECTIVE CASING <u>Steel</u>
		INSIDE DIAMETER <u>6.0 in.</u>
		TOTAL LENGTH <u>5.0 ft.</u>
		BOTTOM OF PROTECTIVE CASING EL. <u>--</u> DEPTH <u>--</u>
		TYPE OF WELL CASING OR RISER PIPE <u>Stainless Steel & Sch. 40 PVC</u>
		INSIDE DIAMETER <u>4.0 in.</u>
		BOTTOM OF SCH. 40 PVC RISER PIPE AND TOP OF STAINLESS STEEL RISER PIPE <u>3.2 ft.</u>
		APPROXIMATE DIAMETER OF BOREHOLE <u>10 in.</u>
30.5	35.5	BOTTOM OF CASING OR RISER PIPE EL. <u>537.94</u> DEPTH <u>35.5 ft.</u>
BEDROCK (GNEISS)	OPEN CORE HOLE	TYPE OF WELLPOINT <u>Open Core Hole</u>
		SCREEN GAUGE OR SIZE OF OPENINGS <u>None</u>
		INSIDE DIAMETER <u>3.8 in.</u>
		TYPE OF BACKFILL AROUND POINT <u>--</u>
		BOTTOM OF WELL POINT EL. <u>--</u> DEPTH <u>--</u>
		BOTTOM OF BOREHOLE EL. <u>518.44</u> DEPTH <u>55.0 ft.</u>

• FIGURES ABOVE REFER TO DEPTH IN FEET • ALL DEPTHS ARE REFERENCED TO GROUND SURFACE

36.75 ft.	+	20.0 ft.	=	56.75 ft.	BENTONITE SEALS 
LENGTH OF RISER PIPE		LENGTH OF CORE HOLE		TOTAL	



SIRRINE
ENVIRONMENTAL
CONSULTANTS

GROUND WATER MONITORING INSTALLATION DETAIL

PROJECT: <u>MEDLEY FARM SITE RVFS</u>		JOB NO <u>G-8026</u>
LOCATION: <u>GAFFNEY, SOUTH CAROLINA</u>		INSTALLATION NO <u>BW4</u>
CLIENT: <u>MEDLEY FARM STEERING COMMITTEE</u>		TYPE OF INSTALLATION <u>BEDROCK MONITORING WELL</u>
CONTRACTOR: <u>ENVIRONMENTAL DRILLING & SERVICES</u>		BORING NO. <u>BW4</u>
DRILLER: <u>D. G. FITZPATRICK</u>	CERTIFICATION NO: <u>593</u>	LOCATION <u>SEE PLAN</u>
SEC FIELD REPRESENTATIVE: <u>RICHARD L. BURDINE</u>		INSTALLATION DATE <u>7/14/89</u>

SURVEY DATUM <u>N.G.V.D.</u>		TOP OF PROTECTIVE CASING (CAP OPEN) EL. <u>---</u> STICKUP <u>---</u>
GROUND SURFACE ELEVATION: <u>562.65</u>		TOP OF WELL CASING OR RISER PIPE EL. <u>564.32</u> DEPTH <u>1.8 ft.</u>
SUMMARIZE SOIL CONDITIONS, BACKFILL AND SEALS (NOT TO SCALE)	ALLUVIUM 5.0	TYPE OF SURFACE SEAL <u>Neat Cement Grout</u> THICKNESS OF SURFACE SEAL <u>4.0 in.</u>
	SAPROLITE	TYPE OF PROTECTIVE CASING <u>Steel</u> INSIDE DIAMETER <u>6.0 in.</u> TOTAL LENGTH <u>5.0 ft.</u>
		BOTTOM OF PROTECTIVE CASING EL. <u>---</u> DEPTH <u>---</u>
		TYPE OF WELL CASING OR RISER PIPE <u>Stainless Steel</u> INSIDE DIAMETER <u>4.0 in.</u>
	BEDROCK (GNEISS)	APPROXIMATE DIAMETER OF BOREHOLE <u>10 in.</u>
		BOTTOM OF CASING OR RISER PIPE EL. <u>544.65</u> DEPTH <u>18.0 ft.</u>
		TYPE OF WELLPOINT <u>Open Core Hole</u> SCREEN GAUGE OR SIZE OF OPENINGS <u>None</u> INSIDE DIAMETER <u>3.8 in.</u> TYPE OF BACKFILL AROUND POINT <u>---</u>
		BOTTOM OF WELL POINT EL. <u>---</u> DEPTH <u>---</u>
	NEAT CEMENT GROUT WITH 3% BENTONITE BY WEIGHT OPEN CORE HOLE BOTTOM OF BOREHOLE EL. <u>531.65</u> DEPTH <u>31.0 ft.</u>	
	• FIGURES ABOVE REFER TO DEPTH IN FEET • ALL DEPTHS ARE REFERENCED TO GROUND SURFACE	
19.8 ft. + 13.0 ft. = 32.8 ft. LENGTH OF RISER PIPE + LENGTH OF CORE HOLE = TOTAL		BENTONITE SEALS

GROUND WATER MONITORING INSTALLATION DETAIL

PROJECT: <u>MEDLEY FARM R/FS PHASE II</u>		JOB NO <u>G-8026.00</u>	
LOCATION: <u>GAFFNEY, SOUTH CAROLINA</u>		INSTALLATION NO <u>BW105</u>	
CLIENT: <u>MEDLEY FARM STEERING COMMITTEE</u>		TYPE OF INSTALLATION <u>BEDROCK MONITORING WELL</u>	
CONTRACTOR: <u>ATLANTA TESTING & ENGINEERING</u>		BORING NO. <u>BW105</u>	
DRILLER: <u>PAT BERGMAN</u> CERTIFICATION NO: <u>768 (SC)</u>		LOCATION <u>SEE PLAN</u>	
SEC FIELD REPRESENTATIVE: <u>JOE HARRIGAN</u>		INSTALLATION DATE <u>10/3/90</u>	

SURVEY DATUM <u>N.G.V.D.</u>		TOP OF PROTECTIVE CASING (CAP OPEN) EL. <u>671.57</u> STICKUP <u>2.2 ft.</u>	
GROUND SURFACE ELEVATION: <u>669.37</u>		TOP OF WELL CASING OR RISER PIPE EL. <u>671.55</u> DEPTH <u>2.18 ft.</u>	
<div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold;">SUMMARIZE SOIL CONDITIONS, BACKFILL AND SEALS (NOT TO SCALE)</div> <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <p>Saprolite</p> <p>70.0 ft. Transition Zone Between Saprolite and Bedrock</p> <p>84.0 ft. Bedrock (Quartz-Mica Schist)</p> </div> <div style="width: 40%; border-left: 1px solid black; padding-left: 10px;"> <p>Neat Cement Grout/ 3% Bentonite by Weight</p> <p>Bentonite 81.3 ft.</p> <p>Top of Corehole 83.5 ft.</p> <p>89.0 ft.</p> <p>Silica Sand Fx-50 Around 2 In. Screen Inside Corehole</p> <p>Bentonite 112.18 ft.</p> <p>114.38 ft.</p> <p>Neat Cement Grout/ 3% Bentonite By Weight In Corehole</p> </div> <div style="width: 25%; border-left: 1px solid black; padding-left: 10px;"> <p>TOP OF PROTECTIVE CASING (CAP OPEN)</p> <p>TOP OF WELL CASING OR RISER PIPE</p> <p>TYPE OF SURFACE SEAL <u>Concrete Pad</u></p> <p>THICKNESS OF SURFACE SEAL <u>4.0 in.</u></p> <p>TYPE OF PROTECTIVE CASING <u>Lockable Steel</u></p> <p>INSIDE DIAMETER <u>6.0 in.</u></p> <p>TOTAL LENGTH <u>3.2 ft.</u></p> <p>BOTTOM OF PROTECTIVE CASING</p> <p>EL. <u>668.37</u> DEPTH <u>1.0 ft.</u></p> <p>BOTTOM OF 2.0 IN. SCH. 40 PVC PIPE AND TOP OF 2.0 IN. STAINLESS STEEL RISER PIPE <u>39.0 ft.</u></p> <p>APPROXIMATE DIAMETER OF BOREHOLE <u>10 in.</u></p> <p>TYPE OF WELL CASING OR RISER PIPE <u>Sch. 40 PVC & Stainless Steel</u></p> <p>INSIDE DIAMETER <u>4.0 in.</u></p> <p>BOTTOM OF 4.0 IN. SCH. 40 PVC PIPE AND TOP OF 4.0 IN. STAINLESS STEEL RISER PIPE <u>38.6 ft.</u></p> <p>BOTTOM OF 4.0 INCH CASING OR RISER PIPE</p> <p>EL. <u>580.37</u> DEPTH <u>89.0 ft.</u></p> <p>TOP OF WELL POINT</p> <p>EL. <u>578.77</u> DEPTH <u>90.6 ft.</u></p> <p>TYPE OF WELL POINT <u>Stainless Steel Screen Placed Inside 3.8 Inch. Corehole</u></p> <p>SCREEN GAUGE OR SIZE OF OPENINGS <u>0.010 in.</u></p> <p>INSIDE DIAMETER <u>2.0 in.</u></p> <p>TYPE OF BACKFILL AROUND POINT <u>FX-50 Silica Sand</u></p> <p>BOTTOM OF WELL POINT</p> <p>EL. <u>558.57</u> DEPTH <u>110.8 ft.</u></p> <p>BOTTOM OF BOREHOLE</p> <p>EL. <u>530.25</u> DEPTH <u>139.12 ft.</u></p> </div> </div>		<p>• FIGURES ABOVE REFER TO DEPTH IN FEET</p> <p>• ALL DEPTHS ARE REFERENCED TO GROUND SURFACE</p>	


<u>91.18 ft.</u> LENGTH OF RISER PIPE	+	<u>50.12 ft.</u> LENGTH OF CORE HOLE	=	<u>141.3 ft.</u> TOTAL
				BENTONITE SEALS

Note: The lower 24.74 ft. of the corehole was grouted, then a 2.0 inch monitoring well was installed.

GROUND WATER MONITORING INSTALLATION DETAIL

PROJECT: <u>MEDLEY FARM RI/FS PHASE II</u>		JOB NO <u>G-8026.00</u>
LOCATION: <u>GAFFNEY, SOUTH CAROLINA</u>		INSTALLATION NO <u>BW106</u>
CLIENT: <u>MEDLEY FARM STEERING COMMITTEE</u>		TYPE OF INSTALLATION <u>BEDROCK MONITORING WELL</u>
CONTRACTOR: <u>ATLANTA TESTING & ENGINEERING</u>		BORING NO. <u>BW106</u>
DRILLER: <u>PAT BERGMAN</u> CERTIFICATION NO: <u>768 (SC)</u>		LOCATION <u>SEE PLAN</u>
SEC FIELD REPRESENTATIVE: <u>RICHARD BURDINE</u>		INSTALLATION DATE <u>9/20/90</u>

SURVEY DATUM <u>N.G.V.D.</u>		TOP OF PROTECTIVE CASING (CAP OPEN) EL. <u>595.80</u> STICKUP <u>3.29 ft.</u>
GROUND SURFACE ELEVATION: <u>592.51</u>		TOP OF WELL CASING OR RISER PIPE EL. <u>595.76</u> DEPTH <u>3.25 ft.</u>
SUMMARIZE SOIL CONDITIONS, BACKFILL AND SEALS (NOT TO SCALE)	Silt (ML) 11.0 ft.	TYPE OF SURFACE SEAL <u>Concrete Pad</u> THICKNESS OF SURFACE SEAL <u>4.0 in.</u>
	Poorly Graded Sand (SP-SC) (Saprolite) 53.77 ft.	TYPE OF PROTECTIVE CASING <u>Lockable Steel</u> INSIDE DIAMETER <u>6.0 in.</u> TOTAL LENGTH <u>5.0 ft.</u>
		BOTTOM OF PROTECTIVE CASING EL. <u>590.80</u> DEPTH <u>1.71 ft.</u>
	Bedrock (Quartzo-Feldspathic Schist)	TYPE OF WELL CASING OR RISER PIPE <u>Stainless Steel</u> INSIDE DIAMETER <u>4.0 in.</u>
		APPROXIMATE DIAMETER OF BOREHOLE <u>12 in.</u>
	Neat Cement Grout/ 3% Bentonite by Weight	BOTTOM OF CASING OR RISER PIPE EL. <u>533.74</u> DEPTH <u>58.77 ft.</u>
	Open Core Hole	TYPE OF WELL POINT <u>Open Core Hole</u> SCREEN GAUGE OR SIZE OF OPENINGS <u>None</u> INSIDE DIAMETER <u>3.8 in.</u> TYPE OF BACKFILL AROUND POINT <u>-</u>
		BOTTOM OF WELL POINT EL. <u>-</u> DEPTH <u>-</u>
		BOTTOM OF BOREHOLE EL. <u>511.91</u> DEPTH <u>80.6 ft.</u>
	<p>• FIGURES ABOVE REFER TO DEPTH IN FEET</p> <p>• ALL DEPTHS ARE REFERENCED TO GROUND SURFACE</p>	

62.02 ft. LENGTH OF RISER PIPE	+	21.83 ft. LENGTH OF CORE HOLE	=	83.85 ft. TOTAL	BENTONITE SEALS 
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GROUND WATER MONITORING INSTALLATION DETAIL

PROJECT: <u>MEDLEY FARM R/FS PHASE II</u>		JOB NO <u>G-8026.00</u>
LOCATION: <u>GAFFNEY, SOUTH CAROLINA</u>		INSTALLATION NO <u>BW108</u>
CLIENT: <u>MEDLEY FARM STEERING COMMITTEE</u>		TYPE OF INSTALLATION <u>BEDROCK MONITORING WELL</u>
CONTRACTOR: <u>ATLANTA TESTING & ENGINEERING</u>		BORING NO. <u>BW108</u>
DRILLER: <u>KEVIN WARREN</u> CERTIFICATION NO: <u>750 (SC)</u>		LOCATION <u>SEE PLAN</u>
SEC FIELD REPRESENTATIVE: <u>JOE HARRIGAN</u>		INSTALLATION DATE <u>9/6/90</u>

SURVEY DATUM <u>N.G.V.D.</u>		TOP OF PROTECTIVE CASING (CAP OPEN) EL. <u>605.70</u> STICKUP <u>2.55 ft.</u>
GROUND SURFACE ELEVATION: <u>603.15</u>		TOP OF WELL CASING OR RISER PIPE EL. <u>605.64</u> DEPTH <u>2.49 ft.</u>
SUMMARIZE SOIL CONDITIONS, BACKFILL AND SEALS (NOT TO SCALE)	Silt (ML) 12.0 ft.	TYPE OF SURFACE SEAL <u>Concrete Pad</u> THICKNESS OF SURFACE SEAL <u>4.0 in.</u>
	Silt (ML) Saprolite 50.0 ft.	TYPE OF PROTECTIVE CASING INSIDE DIAMETER <u>Lockable Steel</u> TOTAL LENGTH <u>6.0 in.</u> <u>5.0 ft.</u>
	Transition Zone Between Saprolite and Bedrock 68.8 ft.	BOTTOM OF PROTECTIVE CASING EL. <u>600.70</u> DEPTH <u>2.45 ft.</u>
	Bedrock (Quartzo-Feldspathic Schist) 73.8 ft.	TYPE OF WELL CASING OR RISER PIPE INSIDE DIAMETER <u>Stainless Steel</u> <u>4.0 in.</u>
		APPROXIMATE DIAMETER OF BOREHOLE <u>10 in.</u>
		BOTTOM OF CASING OR RISER PIPE EL. <u>529.35</u> DEPTH <u>73.8 ft.</u>
		TYPE OF WELLPOINT SCREEN GAUGE OR SIZE OF OPENINGS <u>Open Core Hole</u> INSIDE DIAMETER <u>None</u> TYPE OF BACKFILL AROUND POINT <u>3.8 in.</u>
	Bottom of Well Point EL. <u>-</u> DEPTH <u>-</u>	
	Bottom of Borehole EL. <u>509.25</u> DEPTH <u>93.9 ft.</u>	

• FIGURES ABOVE REFER TO DEPTH IN FEET

• ALL DEPTHS ARE REFERENCED TO GROUND SURFACE

56.19 ft. + 20.1 ft. = 76.29 ft.

LENGTH OF RISER PIPE + LENGTH OF CORE HOLE = TOTAL

BENTONITE SEALS


GROUND WATER MONITORING INSTALLATION DETAIL

PROJECT: <u>MEDLEY FARM RVFS PHASE II</u>		JOB NO <u>G-8026.00</u>
LOCATION: <u>GAFFNEY, SOUTH CAROLINA</u>		INSTALLATION NO <u>BW109</u>
CLIENT: <u>MEDLEY FARM STEERING COMMITTEE</u>		TYPE OF INSTALLATION <u>BEDROCK MONITORING WELL</u>
CONTRACTOR: <u>ATLANTA TESTING & ENGINEERING</u>		BORING NO. <u>BW109</u>
DRILLER: <u>PAT BERGMAN</u> CERTIFICATION NO: <u>768 (SC)</u>		LOCATION <u>SEE PLAN</u>
SEC FIELD REPRESENTATIVE: <u>RICHARD BURDINE</u>		INSTALLATION DATE <u>9/27/90</u>

SURVEY DATUM <u>N.G.V.D.</u>		TOP OF PROTECTIVE CASING (CAP OPEN) EL. <u>661.56</u> STICKUP <u>2.41 ft.</u>
GROUND SURFACE ELEVATION: <u>659.15</u>		TOP OF WELL CASING OR RISER PIPE EL. <u>661.47</u> DEPTH <u>2.32 ft.</u>
SUMMARIZE SOIL CONDITIONS, BACKFILL AND SEALS (NOT TO SCALE)	Silt (ML)	TYPE OF SURFACE SEAL <u>Concrete Pad</u>
		THICKNESS OF SURFACE SEAL <u>4.0 in.</u>
	Neat Cement Grout/ 3% Bentonite by Weight	TYPE OF PROTECTIVE CASING <u>Lockable Steel</u>
		INSIDE DIAMETER <u>6.0 in.</u>
		TOTAL LENGTH <u>5.0 ft.</u>
		BOTTOM OF PROTECTIVE CASING EL. <u>656.56</u> DEPTH <u>2.59 ft.</u>
	63.5 ft.	TYPE OF WELL CASING OR RISER PIPE <u>Sch.40 PVC & Stainless Steel</u>
		INSIDE DIAMETER <u>4.0 in.</u>
		BOTTOM OF SCH. 40 PVC PIPE AND TOP OF STAINLESS STEEL RISER PIPE <u>33.5 in.</u>
		APPROXIMATE DIAMETER OF BOREHOLE <u>10 in.</u>
68.5 ft.	BOTTOM OF CASING OR RISER PIPE EL. <u>590.65</u> DEPTH <u>68.5 ft.</u>	
	TYPE OF WELLPOINT <u>Open Core Hole</u>	
	SCREEN GAUGE OR SIZE OF OPENINGS <u>None</u>	
	INSIDE DIAMETER <u>3.8 in.</u>	
Bedrock (Quartzo- Feldspathic Schist)	TYPE OF BACKFILL AROUND POINT <u>-</u>	
	BOTTOM OF WELL POINT EL. <u>-</u> DEPTH <u>-</u>	
	BOTTOM OF BOREHOLE EL. <u>569.15</u> DEPTH <u>90.0 ft.</u>	

• FIGURES ABOVE REFER TO DEPTH IN FEET • ALL DEPTHS ARE REFERENCED TO GROUND SURFACE

70.82 ft.	+	21.5 ft.	=	92.32 ft.
LENGTH OF RISER PIPE		LENGTH OF CORE HOLE		TOTAL


BENTONITE SEALS 

GROUND WATER MONITORING INSTALLATION DETAIL

PROJECT: <u>MEDLEY FARM R/VFS PHASE II</u>		JOB NO <u>G-8026.00</u>
LOCATION: <u>GAFFNEY, SOUTH CAROLINA</u>		INSTALLATION NO <u>BW110</u>
CLIENT: <u>MEDLEY FARM STEERING COMMITTEE</u>		TYPE OF INSTALLATION <u>BEDROCK MONITORING WELL</u>
CONTRACTOR: <u>ATLANTA TESTING & ENGINEERING</u>		BORING NO. <u>BW110</u>
DRILLER: <u>KEVIN WARREN</u> CERTIFICATION NO: <u>750 (SC)</u>		LOCATION <u>SEE PLAN</u>
SEC FIELD REPRESENTATIVE: <u>JOEY GILLESPIE</u>		INSTALLATION DATE <u>9/27/90</u>

SURVEY DATUM <u>N.G.V.D.</u>		TOP OF PROTECTIVE CASING (CAP OPEN) EL. <u>626.32</u> STICKUP <u>1.09 ft.</u>
GROUND SURFACE ELEVATION: <u>625.23</u>		TOP OF WELL CASING OR RISER PIPE EL. <u>626.36</u> DEPTH <u>1.13 ft.</u>
SUMMARIZE SOIL CONDITIONS, BACKFILL AND SEALS (NOT TO SCALE)	Silty Clay (CL)	TYPE OF SURFACE SEAL <u>Concrete Pad</u> THICKNESS OF SURFACE SEAL <u>4.0 in.</u>
	9.0 ft.	TYPE OF PROTECTIVE CASING <u>Lockable Steel</u> INSIDE DIAMETER <u>6.0 in.</u> TOTAL LENGTH <u>3.0 ft.</u>
	Silt (ML)	BOTTOM OF PROTECTIVE CASING EL. <u>623.32</u> DEPTH <u>1.91 ft.</u>
	22.0 ft.	TYPE OF WELL CASING OR RISER PIPE <u>Sch.40 PVC & Stainless Steel</u> INSIDE DIAMETER <u>4.0 in.</u>
	Clayey Silt (ML)	BOTTOM OF SCH. 40 PVC PIPE AND TOP OF STAINLESS STEEL RISER PIPE
	59.1 ft.	APPROXIMATE DIAMETER OF BOREHOLE <u>10 in.</u>
	64.1 ft.	BOTTOM OF CASING OR RISER PIPE EL. <u>561.13</u> DEPTH <u>64.1 ft.</u>
	Open Core Hole	TYPE OF WELLPOINT <u>Open Core Hole</u> SCREEN GAUGE OR SIZE OF OPENINGS <u>None</u> INSIDE DIAMETER <u>3.8 in.</u> TYPE OF BACKFILL AROUND POINT <u>-</u>
	Bedrock (Quartzo-Feldspathic Schist)	BOTTOM OF WELL POINT EL. <u>-</u> DEPTH <u>-</u>
		BOTTOM OF BOREHOLE EL. <u>540.73</u> DEPTH <u>84.5 ft.</u>

• FIGURES ABOVE REFER TO DEPTH IN FEET • ALL DEPTHS ARE REFERENCED TO GROUND SURFACE


65.23 ft.	+	20.4 ft.	=	85.63 ft.	BENTONITE SEALS 
LENGTH OF RISER PIPE		LENGTH OF CORE HOLE		TOTAL	

GROUND WATER MONITORING INSTALLATION DETAIL

PROJECT: <u>MEDLEY FARM R/FS PHASE II</u>		JOB NO <u>G-8026.00</u>
LOCATION: <u>GAFFNEY, SOUTH CAROLINA</u>		INSTALLATION NO <u>BW111</u>
CLIENT: <u>MEDLEY FARM STEERING COMMITTEE</u>		TYPE OF INSTALLATION <u>DEEP BEDROCK MONITORING WELL</u>
CONTRACTOR: <u>LEE & SIMS WELL DRILLING</u>		BORING NO. <u>BW111</u>
DRILLER: <u>JOHN SIMS</u> CERTIFICATION NO: <u>808 (SC)</u>		LOCATION <u>SEE PLAN</u>
SEC FIELD REPRESENTATIVE: <u>RICHARD BURDINE</u>		INSTALLATION DATE <u>10/3/90</u>

SURVEY DATUM <u>N.G.V.D.</u>		TOP OF PROTECTIVE CASING (CAP OPEN) EL. <u>~ 672.41</u> STICKUP <u>~ 3.04 ft.</u>
GROUND SURFACE ELEVATION: <u>~ 669.37</u>		TOP OF WELL CASING OR RISER PIPE EL. <u>~ 672.41</u> DEPTH <u>3.04 ft.</u>
SUMMARIZE SOIL CONDITIONS, BACKFILL AND SEALS (NOT TO SCALE)	Saprolite	TYPE OF SURFACE SEAL <u>Concrete Pad</u>
		THICKNESS OF SURFACE SEAL <u>4.0 in.</u>
	Neat Cement Grout/ 3% Bentonite by Weight	TYPE OF PROTECTIVE CASING <u>Lockable Steel</u>
		INSIDE DIAMETER <u>6.0 in.</u>
		TOTAL LENGTH <u>5.0 ft.</u>
		BOTTOM OF PROTECTIVE CASING EL. <u>~ 667.41</u> DEPTH <u>1.96 ft.</u>
	90.0 ft.	TYPE OF WELL CASING OR RISER PIPE <u>Sch.40 PVC & Stainless Steel</u>
		INSIDE DIAMETER <u>4.0 in.</u>
	Bedrock	BOTTOM OF SCH. 40 PVC PIPE AND TOP OF STAINLESS STEEL RISER PIPE <u>39.15 ft.</u>
		APPROXIMATE DIAMETER OF BOREHOLE <u>10 in.</u>
189.0 ft.	BOTTOM OF CASING OR RISER PIPE EL. <u>~ 480.37</u> DEPTH <u>189.0 ft.</u>	
	TYPE OF WELLPOINT <u>Open Core Hole</u>	
Bedrock (Biotite Gneiss)	SCREEN GAUGE OR SIZE OF OPENINGS <u>None</u>	
	INSIDE DIAMETER <u>3.8 in.</u>	
		TYPE OF BACKFILL AROUND POINT <u>-</u>
		BOTTOM OF WELL POINT EL. <u>-</u> DEPTH <u>-</u>
		BOTTOM OF BOREHOLE EL. <u>~ 420.97</u> DEPTH <u>248.4 ft.</u>

• FIGURES ABOVE REFER TO DEPTH IN FEET • ALL DEPTHS ARE REFERENCED TO GROUND SURFACE


193.04 ft.	+	59.4 ft.	=	251.44 ft.	BENTONITE SEALS 
LENGTH OF RISER PIPE		LENGTH OF CORE HOLE		TOTAL	

GROUND WATER MONITORING INSTALLATION DETAIL

PROJECT: <u>MEDLEY FARM R/FS PHASE II</u>		JOB NO <u>G-8026.00</u>
LOCATION: <u>GAFFNEY, SOUTH CAROLINA</u>		INSTALLATION NO <u>BW112</u>
CLIENT: <u>MEDLEY FARM STEERING COMMITTEE</u>		TYPE OF INSTALLATION <u>DEEP</u> <u>BEDROCK MONITORING WELL</u>
CONTRACTOR: <u>LEE & SIMS WELL DRILLING</u>		BORING NO. <u>BW112</u>
DRILLER: <u>TOMMY LOFTIS</u> CERTIFICATION NO: <u>174 (SC)</u>		LOCATION <u>SEE PLAN</u>
SEC FIELD REPRESENTATIVE: <u>RICHARD BURDINE</u>		INSTALLATION DATE <u>10/8/90</u>

SURVEY DATUM <u>N.G.V.D.</u>		TOP OF PROTECTIVE CASING (CAP OPEN) EL. <u>664.20</u> STICKUP <u>2.36 ft.</u>
GROUND SURFACE ELEVATION: <u>661.84</u>		TOP OF WELL CASING OR RISER PIPE EL. <u>664.08</u> DEPTH <u>2.24 ft.</u>
SUMMARIZE SOIL CONDITIONS, BACKFILL AND SEALS (NOT TO SCALE)	Saprolite	TYPE OF SURFACE SEAL <u>Concrete Pad</u>
		THICKNESS OF SURFACE SEAL <u>4.0 in.</u>
	Bedrock	TYPE OF PROTECTIVE CASING <u>Lockable Steel</u>
		INSIDE DIAMETER <u>6.0 in.</u>
		TOTAL LENGTH <u>5.0 ft.</u>
	Bedrock	BOTTOM OF PROTECTIVE CASING EL. <u>659.20</u> DEPTH <u>2.64 ft.</u>
		TYPE OF WELL CASING OR RISER PIPE <u>Sch. 40 PVC & Stainless Steel</u>
	Bedrock (Gneiss)	INSIDE DIAMETER <u>4.0 in.</u>
		BOTTOM OF SCH. 40 PVC PIPE AND TOP OF STAINLESS STEEL RISER PIPE <u>39.0 ft.</u>
	APPROXIMATE DIAMETER OF BOREHOLE <u>10 in.</u>	
BOTTOM OF CASING OR RISER PIPE EL. <u>482.84</u> DEPTH <u>179.0 ft.</u>		
TYPE OF WELLPOINT <u>Open core hole</u>		
SCREEN GAUGE OR SIZE OF OPENINGS <u>None</u>		
INSIDE DIAMETER <u>3.8 in.</u>		
TYPE OF BACKFILL AROUND POINT <u>-</u>		
BOTTOM OF WELL POINT EL. <u>-</u> DEPTH <u>-</u>		
BOTTOM OF BOREHOLE EL. <u>422.84</u> DEPTH <u>239.0 ft.</u>		

• FIGURES ABOVE REFER TO DEPTH IN FEET • ALL DEPTHS ARE REFERENCED TO GROUND SURFACE

181.24 ft.	+	60.0 ft.	=	241.24 ft.	BENTONITE SEALS 
LENGTH OF RISER PIPE		LENGTH OF CORE HOLE		TOTAL	

Filter Sands

Typical Screen Analysis

Percent Retained Cumulative

U.S. Mesh ----	FX99 ----	FX50 ----	S.B.Filter (wet) ----
6	0.0		0.0
8	4.6		0.0
10	20.0		0.5
12	62.7		1.5
14	93.2	0.0	4.6
16	98.9	1.0	8.6
18	99.5	9.5	18.2
20	99.8	26.5	31.4
25	99.9	45.9	47.6
30	99.9	74.5	63.9
35	100.0	92.4	79.9
40	100.0	97.8	89.4
45		99.3	94.3
50		99.8	97.1
70		99.9	99.1
Pan	100.0	100.0	100.0
Effective Size	1.431	0.513	0.416
Uniformity Coefficient	1.299	1.466	1.863

Percent Retained Per Sieve

U.S. Mesh ----	FX99 ----	FX50 ----	S.B.Filter (wet) ----
6	0.0		0.0
8	4.6		0.0
10	15.4		0.5
12	42.7		1.0
14	30.5	0.0	3.1
16	5.7	1.0	4.0
18	0.6	8.5	9.6
20	0.3	17.0	13.2
25	0.1	19.4	16.2
30	0.0	28.6	16.3
35	0.1	17.9	16.0
40	0.0	5.4	9.5
45		1.5	4.9
50		0.5	2.8
70		0.1	2.0
Pan	0.0	0.1	0.9

sandblasting sands

Typical Screen Analysis
Percent Retained Cumulative

U.S. Mesh -----	BX8 -----	BX12 -----	BX30 -----	BX40 -----
6	0.0			
8	1.2	0.0		
12	10.3	0.6		
16	26.9	10.6		
20	48.7	33.5	0.1	0.1
30	80.6	68.6	6.0	1.2
40	96.4	92.1	31.4	12.9
50	100.0	99.7	66.7	45.7
70			87.6	76.9
100			96.1	92.2
140			99.2	98.8
200			99.8	99.9
270			100.0	100.0
Pan	100.0	100.0	100.0	100.0

Percent Retained Per Sieve

U.S. Mesh -----	BX8 -----	BX12 -----	BX30 -----	BX40 -----
6	0.0			
8	1.2	0.0		
12	9.1	0.6		
16	16.6	10.0	0.0	0.0
20	21.8	22.9	0.1	0.1
30	31.9	35.1	5.9	1.1
40	15.8	23.5	25.4	11.7
50	3.6	7.6	35.3	32.8
70			20.9	31.2
100			8.5	15.3
140			3.1	6.6
200			0.6	1.1
270			0.2	0.1
Pan			0.0	0.0

APPENDIX F
MONITORING WELL DEVELOPMENT LOGS

Monitoring Well Development Log

Page 1 of 2

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date Started (yr/mo/day) 89/7/6 Date Completed (yr/mo/day) 89/7/6

Field Personnel M. WARD

Site Name MEDLEY FARMS GAFFNEY, SC

SEC Job # G-8026

Well ID # SW-1

☒ Upgradient ☐ Downgradient

Weather Conditions OVERCAST

Air Temperature 26.5 °C

Total Well Depth (TWD) = 62.0 TOC 1/100 ft

Depth to Ground Water (DGW) = 52.1 TOC 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 9.9 1/100 ft

1 Casing Volume (OCV) = LWC x .163 = 1.61 gallons

5 Casing Volumes = 8.07 gallons

Method of Well Development BRAINARD-KILMAN HAND PUMP

Total Volume of Water Removed 41 gallons

Date/Time	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1345		2	22.2	7.19		75	very turbid	2	
1352		4	19.1	6.67		101	very turbid	2	
									Surge for 1 minute
1400		6	19.0	6.25		102	very turbid	2	
1410		8	17.4	6.29		90	very turbid	2	
1415		10	18.0	6.50		92	turbid	1	
1419		12	18.1	6.59		91	turbid	1	well pumped dry
1425		14	18.3	6.49		86	turbid	1	
1428		16	18.5	6.50		84	turbid	1	
1432		18	18.3	6.51		83	turbid	1	

COMMENTS/OBSERVATIONS: _____

Monitoring Well Development Log

Page 2 of 2

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

<p>Date Started (yr/mo/day) <u>89/7/6</u> Date Completed (yr/mo/day) <u>89/7/6</u></p> <p>Field Personnel <u>M. WARD</u></p> <p>Site Name <u>MEDLEY FARMS</u> <u>GAFFNEY, SC</u></p> <p>SEC Job # <u>G-8026</u></p> <p>Well ID # <u>SW-1</u></p> <p><input checked="" type="checkbox"/> Upgradient <input type="checkbox"/> Downgradient</p> <p>Weather Conditions <u>OVERCAST</u></p> <p>Air Temperature _____ 26.5 °C</p>	<p>Total Well Depth (TWD) = <u>62.0</u> TOC <u>1/100</u> ft</p> <p>Depth to Ground Water (DGW) = <u>52.1</u> TOC <u>1/100</u> ft</p> <p>Length of Water Column (LWC) = TWD - DGW = <u>9.9</u> 1/100 ft</p> <p>1 Casing Volume (OCV) = LWC x <u>.163</u> = <u>1.61</u> gallons</p> <p>5 Casing Volumes = <u>8.07</u> gallons</p> <p>Method of Well Development <u>BRAINARD-KILMAN HAND PUMP</u></p> <p>Total Volume of Water Removed _____ 41 gallons</p>
--	---

Date/Time	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1514		20	19.0	6.00		76	turbid	1	
1533		24	18.5	6.30		81	turbid	1	
1544		28	18.9	5.90		80	turbid	1	
1550		30	18.7	6.13		80	turbid	1	
1601		34	18.5	6.20		79	turbid	1	well pumped dry
1635		36	18.7	6.10		82	turbid	1	
1641		38	18.5	6.12		81	turbid	0	
1647		41	18.5	6.14		82	turbid	0	

COMMENTS/OBSERVATIONS: _____

Monitoring Well Development Log

Page 1 of 5

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date Started (yr/mo/day) 90/8/22 Date Completed (yr/mo/day) 90/8/23
Field Personnel Rob Enright, Richard Burdine
Site Name Medley Farm RI/FS - Phase II
SEC Job # G-8026
Well ID # SW1
☒ Upgradient ☐ Downgradient
Weather Conditions Hazy, Hot, and Humid
Air Temperature 32 °C

Total Well Depth (TWD) = 61.80 TOC 1/100 ft
Depth to Ground Water (DGW) = 49.50 TOC 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 12.30 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 2.00 gallons
5 Casing Volumes = 10.00 gallons
Method of Well Development Alternating Surge Block,
Brainard-Kilman Hand Pump, and Teflon Baller
Total Volume of Water Removed 107.0 gallons

Date/Time 8/22/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
850	1.0	2.5	15.0	6.10	--	310	turbid/brown	1	
900	1.0	5.0	14.5	5.78	--	280	turbid/brown	0	
909	1.0	7.5	14.5	6.06	--	270	turbid/brown	0	
915	1.0	10.0	14.1	6.20	--	270	turbid/brown	0	
922	1.0	12.5	14.1	6.19	--	280	turbid/brown	0	
935	1.0	15.0	14.8	6.17	--	360	turbid/brown	0	
942	1.0	17.5	14.5	6.39	--	340	turbid/brown	0	
954	1.0	20.0	14.8	6.45	--	580	turbid/brown	0	
1003	1.0	22.5	15.0	6.57	--	540	turbid/brown	0	
1011	1.0	25.0	15.6	6.64	--	540	turbid/brown	0	

COMMENTS/OBSERVATIONS: _____

Monitoring Well Development Log

Page 2 of 5

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date Started (yr/mo/day) 90/8/22 Date Completed (yr/mo/day) 90/8/23

Field Personnel Rob Enright, Richard Burdine

Site Name Medley Farm RI/FS - Phase II

SEC Job # G-8026

Well ID # SW1

☒ Upgradient ☐ Downgradient

Weather Conditions Hazy to Partly Cloudy, Hot, Humid

Air Temperature 21.5 °C

Total Well Depth (TWD) = 61.80 TOC 1/100 ft

Depth to Ground Water (DGW) = 49.50 TOC 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 12.30 1/100 ft

1 Casing Volume (OCV) = LWC x 0.163 = 2.00 gallons

5 Casing Volumes = 10.00 gallons

Method of Well Development Alternating Surge Block,
Brainard-Kilman Hand Pump, and Teflon Baller

Total Volume of Water Removed 107.0 gallons

Date/Time 8/22/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1032	1.0	27.5	15.5	6.63	--	570	turbid/brown	0	
1043	1.0	30.0	15.8	6.36	--	540	turbid/ light brown	0	
1055	1.0	32.5	16.0	6.68	--	600	turbid/ light brown	0	
1104	1.0	35.0	15.2	6.78	--	580	turbid/ light brown	0	
1122	1.0	37.5	15.3	6.46	--	370	turbid/ light brown	0	
1135	1.0	40.0	15.8	6.76	--	250	turbid/tan	0	
1320	1.0	42.5	15.6	6.18	--	--	turbid/ light brown	0	
1357	1.0	45.0	14.4	--	--	--	turbid/tan	0	ph/cond . meter broken
1402	1.7	47.5	14.3	--	--	--	turbid//tan	0	
1405	0.5	50.0	14.4	--	--	--	turbid/tan	0	

COMMENTS/OBSERVATIONS: Development after removing 45.0 gallons was accomplished using turbidity /color and temperature as indicator parameters due to erroneous readings obtained from pH/conductivity meters.

Monitoring Well Development Log

Page 3 of 5

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date Started (yr/mo/day) 90/8/22 Date Completed (yr/mo/day) 90/8/23

Field Personnel Rob Enright, Richard Burdine

Site Name Medley Farm RI/FS - Phase II

SEC Job # G-8026

Well ID # SW1

☒ Upgradient ☐ Downgradient

Weather Conditions Partly Cloudy, Hot, Humid

Air Temperature 19.8 °C

Total Well Depth (TWD) = 61.80 TOC 1/100 ft

Depth to Ground Water (DGW) = 49.50 TOC 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 12.30 1/100 ft

1 Casing Volume (OCV) = LWC x 0.163 = 2.00 gallons

5 Casing Volumes = 10.00 gallons

Method of Well Development Alternating Surge Block,

Brainard-Kilman Hand Pump, and Teflon Baller

Total Volume of Water Removed 107.0 gallons

Date/Time 8/22/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1432	1.0	52.5	16.0	--	--	--	turbid/tan	0	
1436	1.0	55.0	14.2	--	--	--	turbid/tan	0	
1452	1.0	57.5	14.5	--	--	--	turbid/tan	0	
1507	1.0	60.0	17.5	--	--	--	turbid/tan	0	
1531	1.0	62.5	14.5	--	--	--	turbid/tan	0	dry after pumping 0.4 gals.
1546	0.5	65.0	14.5	--	--	--	turbid/tan	0	
1549	0.5	67.5	14.7	--	--	--	turbid/tan	0	
1558	0.5	70.0	14.7	--	--	--	turbid//tan	0	finished w/BK hand pump
8/23/90 0919	--	2.5	14.5	--	--	--	turbid/brown	0	using baller
0926	--	5.0	--	--	--	--	turbid/ light brown	0	

COMMENTS/OBSERVATIONS: _____

Monitoring Well Development Log

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Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date Started (yr/mo/day) 90/8/22 Date Completed (yr/mo/day) 90/8/23
Field Personnel Rob Enright, Richard Burdine
Site Name Medley Farm RI/FS - Phase II
SEC Job # G-8026
Well ID # SW1
☒ Upgradient ☐ Downgradient
Weather Conditions Cloudy, Hot, Humid
Air Temperature 19.0 °C

Total Well Depth (TWD) = 61.80 TOC 1/100 ft
Depth to Ground Water (DGW) = 49.50 TOC 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 12.30 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 2.00 gallons
5 Casing Volumes = 10.00 gallons
Method of Well Development Alternating Surge Block,
Brainard-Kilman Hand Pump, and Teflon Baller
Total Volume of Water Removed 107.0 gallons

Date/Time 8/23/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
0933	--	7.5	--	--	--	--	turbid/ light brown	1	
0942	--	10.0	14.2	--	--	--	turbid/ light brown	1	
0950	--	12.5	--	--	--	--	turbid/ light brown	0	
0958	--	15.0	--	--	--	--	turbid/ light brown	0	
1005	--	17.5	--	--	--	--	turbid/ light brown	0	
1012	--	20.0	--	--	--	--	turbid/ light brown	0	
1020	--	22.5	--	--	--	--	turbid/ light brown	0	
1032	--	25.0	14.7	--	--	--	turbid/ light brown	0	
1044	--	27.5	--	--	--	--	turbid/ light brown	0	
1052	--	30.0	--	--	--	--	turbid/ light brown	0	

COMMENTS/OBSERVATIONS: _____

Monitoring Well Development Log

Page 5 of 5

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date Started (yr/mo/day) 90/8/22 Date Completed (yr/mo/day) 90/8/23
Field Personnel Rob Enright, Richard Burdine
Site Name Medley Farm RI/FS - Phase II
SEC Job # G-8026
Well ID # SW1
☒ Upgradient ☐ Downgradient
Weather Conditions Cloudy, Hot, Humid
Air Temperature 19.0 °C

Total Well Depth (TWD) = 61.80 TOC 1/100 ft
Depth to Ground Water (DGW) = 49.50 TOC 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 12.30 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 2.00 gallons
5 Casing Volumes = 10.00 gallons
Method of Well Development Alternating Surge Block,
Brainard-Kilman Hand Pump, and Teflon Bailer
Total Volume of Water Removed 107.0 gallons

Date/Time 8/23/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1100	--	32.5	--	--	--	--	turbid/ light brown	0	
1112	--	35.0	14.6	--	--	--	turbid/ light brown	0	
1121	--	37.0	--	--	--	--	turbid/ light brown	0	

COMMENTS/OBSERVATIONS: _____

Monitoring Well Development Log

Page 1 of 1

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date Started (yr/mo/day) 89/7/11 Date Completed (yr/mo/day) 89/7/11

Field Personnel M. WARD

Site Name MEDLEY FARM GAFFNEY, SC

SEC Job # G-8026

Well ID # SW-3

☒ Upgradient ☐ Downgradient

Weather Conditions SUNNY & HOT

Air Temperature 33 °C

Total Well Depth (TWD) = 77.00 TOC 1/100 ft

Depth to Ground Water (DGW) = 68.71 TOC 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 8.29 1/100 ft

1 Casing Volume (OCV) = LWC x .163 = 1.35 gallons

5 Casing Volumes = 6.76 gallons

Method of Well Development BRAINARD-KILMAN HAND PUMP

Total Volume of Water Removed 6.5 gallons

Date/Time	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1505		2.5	21.1	7.28		154	very slightly turbid	0	
1602		1.5	20.0	7.27		88	very slightly turbid	0	
1610		1.5	20.3	6.87		85	very slightly turbid	0	
1642		1.0	21.0	7.64		131	very slightly turbid	0	

COMMENTS/OBSERVATIONS: _____

Monitoring Well Development Log

Page 1 of 1

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date Started (yr/mo/day) 89/7/27 Date Completed (yr/mo/day) 89/7/27
Field Personnel R. J. HUNT
Site Name MEDLEY FARMS GAFFNEY, SC
SEC Job # G-8026
Well ID # SW-4
☒ Upgradient ☐ Downgradient
Weather Conditions OVERCAST, HUMID
Air Temperature 32 °C

Total Well Depth (TWD) = 68.3 (TOC) 1/100 ft
Depth to Ground Water (DGW) = 57.59 (TOC) 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 10.71 1/100 ft
1 Casing Volume (OCV) = LWC x .163 = 1.75 gallons
5 Casing Volumes = 8.73 gallons
Method of Well Development BRAINARD - KILMAN HAND PUMP
Total Volume of Water Removed 10.0 gallons

Date/Time	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1030		1.0	23.7	6.51		187	slightly turbid	0	
1034		2.0	19.4	6.37		158	slightly turbid	0	
1041		3.0	18.7	6.30		126	slightly turbid	0	
1047		4.0	18.7	6.31		135	clear	0	
1056		5.0	18.7	6.32		130	clear	0	
1102		6.0	19.3	6.31		126	clear	0	
1115		7.0	18.8	6.30		128	clear	0	
1118		8.0	18.7	6.31		130	clear	0	
1137		9.0	18.8	6.31		128	clear	0	
1141		10.0	18.8	6.31		128	clear	0	

COMMENTS/OBSERVATIONS: Very low discharge. Development stopped at 10 gallons due to stability of parameters and lack of turbidity.

Monitoring Well Development Log

Page 1 of 2

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date Started (yr/mo/day) 90/9/6 Date Completed (yr/mo/day) 90/9/6
Field Personnel Rob Enright, Richard Burdine
Site Name Medley Farm RI/FS - Phase II
SEC Job # G-8026
Well ID # SW101
 Upgradient ☒ Downgradient
Weather Conditions Clear, hot, humid
Air Temperature 20.9 °C

Total Well Depth (TWD) = 36.85 TOC 1/100 ft
Depth to Ground Water (DGW) = 33.02 TOC 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 3.83 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 0.62 gallons
5 Casing Volumes = 3.12 gallons
Method of Well Development Teflon Baller
Total Volume of Water Removed 46.5 (See Comments) gallons

Date/Time 9/6/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
0822	--	0.5	16.8	6.67	--	170.3	turbid/light brown	2	
0836	--	1.0	16.7	6.60	--	166.5	slightly turbid/light brown	1	
0843	--	1.5	16.4	6.50	--	162.4	slightly turbid/light brown	1	
0848	--	2.0	16.0	6.49	--	155.5	slight turbid/tan	1	
0853	--	2.5	16.3	6.55	--	157.8	slight turbid/tan	1	
0857	--	3.0	16.2	6.63	--	161.2	slight turbid/tan	1	
0902	--	3.5	16.4	6.63	--	157.3	slight turbid/tan	1	
0907	--	4.0	16.3	6.65	--	156.5	slight turbid/tan	1	
0912	--	4.5	16.4	6.63	--	159.1	slight turbid/tan	1	
0917	--	5.0	16.3	6.67	--	158.1	slight turbid/tan	1	

COMMENTS/OBSERVATIONS: Approximately 40 gallons were balled to remove the 25-30 gallons introduced during well installation prior to checking parameters.

Monitoring Well Development Log

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Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date Started (yr/mo/day) 90/9/6 Date Completed (yr/mo/day) 90/9/6

Field Personnel Rob Enright

Site Name Medley Farm RI/FS - Phase II

SEC Job # G-8026

Well ID # SW101

☐ Upgradient ☒ Downgradient

Weather Conditions Clear, hot, humid

Air Temperature 20.9 °C

Total Well Depth (TWD) = 36.85 TOC 1/100 ft

Depth to Ground Water (DGW) = 33.02 TOC 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 3.83 1/100 ft

1 Casing Volume (OCV) = LWC x 0.163 = 0.62 gallons

5 Casing Volumes = 3.12 gallons

Method of Well Development Teflon Baller

Total Volume of Water Removed 46.5 (See Comments) gallons

Date/Time 9/6/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
0922	--	5.5	16.3	6.66	--	156.1	slightly turbid/ tan	1	
0928	--	6.0	16.8	6.67	--	151.8	slightly turbid/ tan	1	
0934	--	6.5	16.4	6.65	--	152.4	slightly turbid/ tan	1	

COMMENTS/OBSERVATIONS: _____

Monitoring Well Development Log

Page 1 of 2

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date Started (yr/mo/day) 90/8/24 Date Completed (yr/mo/day) 90/8/27

Field Personnel Rob Enright, Richard Burdine

Site Name Medley Farm RI/FS - Phase II

SEC Job # G-8026

Well ID # SW102

☐ Upgradient ☒ Downgradient

Weather Conditions Partly Cloudy, Hot , Humid

Air Temperature 34 °C

Total Well Depth (TWD) = 51.22 TOC 1/100 ft

Depth to Ground Water (DGW) = 39.95 TOC 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 11.27 1/100 ft

1 Casing Volume (OCV) = LWC x 0.163 = 1.84 gallons

5 Casing Volumes = 9.19 gallons

Method of Well Development Brainard-Kilman Hand Pump and
Teflon Baller

Total Volume of Water Removed 63.5 gallons

Date/Time	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
8/24/90									
1145	--	10.0	--	--	--	--	very turbid/ brown	5	lot of silt
1525	--	17.5	--	--	--	--	very turbid/ brown	5	purged dry
1533	--	20.0	--	--	--	--	very turbid/ brown	5	purged dry
1549	--	25.0	--	--	--	--	turbid/brown	3	purged dry
8/27/90 0721	--	5.0	--	--	--	--	very turbid/ brown	5	purged dry
0746	--	12.5	--	--	--	--	very turbid/ brown	3	purged dry
0800	--	17.0	--	--	--	--	very turbid/ brown	3	purged dry
0817	--	22.5	--	--	--	--	very turbid/ brown	2	purged dry
0832	--	27.0	--	--	--	--	very turbid/ brown	2	surged and purged dry
0908	--	36.0	--	--	--	--	very turbid/ brown	2	surged and purged dry

COMMENTS/OBSERVATIONS: _____

Monitoring Well Development Log

Page 2 of 2

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date Started (yr/mo/day) 90/8/24 Date Completed (yr/mo/day) 908/27
Field Personnel Rob Enright, Richard Burdine
Site Name Medley Farm RI/FS - Phase II
SEC Job # G-8026
Well ID # SW102
 Upgradient ☒ Downgradient
Weather Conditions Partly Cloudy, Hot , Humid
Air Temperature 34 °C

Total Well Depth (TWD) = 51.22 TOC 1/100 ft
Depth to Ground Water (DGW) = 39.95 TOC 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 11.27 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 1.84 gallons
5 Casing Volumes = 9.19 gallons
Method of Well Development Brainard-Kilman Hand Pump and
Teflon Baller
Total Volume of Water Removed 63.5 gallons

Date/Time 8/27/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
0925	--	42.0	--	--	--	--	turbid/light brown	2	purged dry
1000	--	47.5	--	--	--	--	turbid/light brown	2	surged and purged dry
1723	--	51.0	21.0	7.12	--	120	turbid/light brown	2	purged
1730	--	56.0	19.0	7.12	--	140	turbid/light brown	2	purged
1754	--	58.5	20.0	7.12	--	150	turbid/light brown	2	balled
1800	--	61.0	19.0	7.22	--	140	turbid/light brown	2	balled
1805	--	63.5	19.0	7.22	--	140	turbid/light brown	2	balled

COMMENTS/OBSERVATIONS: _____

Monitoring Well Development Log

Page 1 of 2

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date Started (yr/mo/day) 90/8/23 Date Completed (yr/mo/day) 90/8/27
Field Personnel Rob Enright, Richard Burdine
Site Name Medley Farm RI/FS - Phase II
SEC Job # G-8026
Well ID # SW103
 Upgradient X Downgradient
Weather Conditions Sunny, Hot, and Humid
Air Temperature 36 °C

Total Well Depth (TWD) = 47.28 TOC 1/100 ft
Depth to Ground Water (DGW) = 36.70 TOC 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 10.58 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 1.72 gallons
5 Casing Volumes = 8.62 gallons
Method of Well Development Alternating Surge Block, Brainard-Kilman
Hand Pump and Teflon Baller
Total Volume of Water Removed 50.0 gallons

Date/Time 8/23/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1525	--	3.0	20	6.33	--	90	very turbid/ brown	20	pumped dry
1640	--	7.0	18	6.52	--	70	very turbid/ brown	10	balled dry
0930	--	12.0	17.5	6.12	--	170	very turbid/ brown	5	balled dry
1110	--	15.0	17.8	5.51	--	320	very turbid/ brown	5	balled dry
1450	--	30.0	17.5	5.98	--	--	turbid	0-5	balled dry
1612	--	25.0	17.5	6.12	--	--	turbid	0-5	balled dry
1700	--	30.0	17.5	6.15	--	--	turbid	0-5	balled dry

COMMENTS/OBSERVATIONS: _____

Monitoring Well Development Log

Page 2 of 2

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date Started (yr/mo/day) 90/8/23 Date Completed (yr/mo/day) 90/8/27
Field Personnel Rob Enright, Richard Burdine
Site Name Medley Farm RI/FS - Phase II
SEC Job # G-8026
Well ID # SW103
 Upgradient ☒ Downgradient
Weather Conditions Clear, Hot, Humid
Air Temperature 34 °C

Total Well Depth (TWD) = 47.28 TOC 1/100 ft
Depth to Ground Water (DGW) = 36.70 TOC 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 10.58 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 1.72 gallons
5 Casing Volumes = 8.62 gallons
Method of Well Development Alternating Surge Block, Brainard-Kilman
Hand Pump and Teflon Baller
Total Volume of Water Removed 50.0 gallons

Date/Time 8/27/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1117	--	3.0	18.5	6.65	--	200	turbid/light brown	2	balled dry
1410	--	9.5	18.2	6.49	--	80	turbid/light brown	2	balled dry
1431	--	11.5	18.5	6.20	--	200	turbid/tan	1	balled dry
1454	--	14.0	18.7	6.25	--	170	turbid/tan	1	balled dry
1518	--	16.0	18.7	6.37	--	170	turbid/tan	1	balled dry
1544	--	20.0	19.0	6.42	--	180	turbid/tan	1	balled dry

COMMENTS/OBSERVATIONS: _____

Monitoring Well Development Log

Page 1 of 1

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date Started (yr/mo/day) 90/8/22 Date Completed (yr/mo/day) 90/8/28

Field Personnel Richard Burdine

Site Name Medley Farm RI/FS - Phase II

SEC Job # G-8026

Well ID # SW104

☐ Upgradient ☒ Downgradient

Weather Conditions Overcast, Warm and Breezy

Air Temperature 34 °C

Total Well Depth (TWD) = 37.39 TOC 1/100 ft

Depth to Ground Water (DGW) = 21.84 TOC 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 15.55 1/100 ft

1 Casing Volume (OCV) = LWC x 0.163 = 2.53 gallons

5 Casing Volumes = 12.57 gallons

Method of Well Development Alternating Surge Block, Teflon Baller

Total Volume of Water Removed 151 gallons

Date/Time	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
8/22/90 1600	--	16	18	--	--	--	very turbid/ brown	10	Balled dry
8/23/90 1310	--	29	18.1	--	--	--	very turbid/ brown	5	Balled dry
8/24/90 0950	--	47	17.6	--	--	--	very turbid/ brown	5	Balled dry
8/25/90 1610	--	68	17.3	--	--	--	very turbid/ brown	5	Balled dry
8/27/90 1110	--	74	17.8	--	--	--	very turbid/ brown	5	Balled dry
8/27/90 1450	--	90	17.5	--	--	--	very turbid/ brown	5	Balled dry
8/28/90 0810	--	110	17.4	7.40	--	* --	very turbid/ brown	2.3	Balled dry
0915	--	119	17.3	7.10	--	* --	very turbid/ brown	0	Balled dry
1050	--	136	17.4	6.92	--	* --	very turbid/ brown	0	Balled dry
1140	--	151	17.2	6.98	--	* --	very turbid/ brown	0	Balled dry

COMMENTS/OBSERVATIONS: * Specific conductivity meter was malfunctioning. Remove ~ 130 gallons introduced during well installation and then the additional 21.0 gallons for >5 borehole volumes.

Monitoring Well Development Log

Page 1 of 2

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date Started (yr/mo/day) 90/9/11 Date Completed (yr/mo/day) 90/9/11
Field Personnel Rob Enright, Richard Burdine
Site Name Medley Farm RI/FS - Phase II
SEC Job # G-8026
Well ID # SW106
 Upgradient X Downgradient
Weather Conditions Partly Cloudy, Cool, Humid
Air Temperature 20.6 °C

Total Well Depth (TWD) = 24.21 TOC 1/100 ft
Depth to Ground Water (DGW) = 10.26 TOC 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 13.95 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 2.27 gallons
5 Casing Volumes = 11.37 gallons
Method of Well Development Brainard-Kilman Hand Pump and Teflon Baller
Total Volume of Water Removed 92.0 gallons

Date/Time 9/11/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
0815	--	10.0	16.7	6.81	--	103.1	turbid/light brown	10	BK hand pump, failed; using baller
0940	--	20.0	16.6	6.92	--	100.0	slightly turbid/light tan	1	baller
1039	--	30.0	17.1	7.02	--	101.9	turbid/light brown	4	baller
1245	--	40.0	17.3	6.93	--	103.4	slightly turbid/tan	2	baller
1331	--	50.0	17.5	6.96	--	102.8	turbid/tan	3	baller
1424	--	60.0	17.5	6.92	--	104.9	slightly turbid/tan	2	baller
1509	--	70.0	17.8	6.99	--	105.4	slightly turbid/tan	1	baller
1600	--	80.0	17.7	6.96	--	103.1	slightly turbid/tan	1	baller
1610	0.5	82.0	17.3	6.82	--	100.3	slightly turbid/tan	1	baller
1619	0.5	84.0	17.3	6.63	--	101.1	slightly turbid/tan	1	baller

COMMENTS/OBSERVATIONS: 80 gals. of water introduced during drilling of hole and setting of well.

Monitoring Well Development Log

Page 2 of 2

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date Started (yr/mo/day) 90/9/11 Date Completed (yr/mo/day) 90/9/11
Field Personnel Rob Enright, Richard Burdine
Site Name Medley Farm RI/FS - Phase II
SEC Job # G-8026
Well ID # SW106
 Upgradient X Downgradient
Weather Conditions Clear, Sunny, Hot, Humid
Air Temperature 24.3 °C

Total Well Depth (TWD) = 24.21 TOC 1/100 ft
Depth to Ground Water (DGW) = 10.26 TOC 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 13.95 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 2.27 gallons
5 Casing Volumes = 11.37 gallons
Method of Well Development Brainard-Kilman Hand Pump and Teflon Baller
Total Volume of Water Removed 92.0 gallons

Date/Time 9/11/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1628	0.5	86.0	17.6	6.83	--	101.5	slightly turbid/ tan	1	baller
1639	0.5	88.0	17.4	6.80	--	100.2	slightly turbid/ tan	1	baller
1647	0.5	90.0	17.1	6.65	--	101.9	slightly turbid/ tan	1	baller
1657	0.5	92.0	17.2	6.79	--	101.0	slightly turbid/ tan	1	baller

COMMENTS/OBSERVATIONS: _____

Monitoring Well Development Log

Page 1 of 3

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date Started (yr/mo/day) 90/9/5 Date Completed (yr/mo/day) 90/9/24

Field Personnel Rob Enright, Joe Harrigan, Kevin Degroot (AT&E)

Site Name Medley Farm RI/FS - Phase II

SEC Job # G-8026

Well ID # SW108

☐ Upgradient ☒ Downgradient

Weather Conditions Sunny, Hot, Humid

Air Temperature 31.0 °C

Total Well Depth (TWD) = 21.62 TOC 1/100 ft

Depth to Ground Water (DGW) = 7.86 TOC 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 13.76 1/100 ft

1 Casing Volume (OCV) = LWC x 0.163 = 2.24 gallons

5 Casing Volumes = 11.21 gallons

Method of Well Development Brainard-Kilman Hand Pump and Teflon Bailer

Total Volume of Water Removed 33.0 gallons

Date/Time 9/5/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1510	0.5	2.0	--	--	--	--	turbid/light brown	10	BK Hand Pump broke
1630	--	3.5	--	--	--	--	turbid/light brown	10	using bailer, bailed dry
1645	--	4.0	--	--	--	--	turbid/light brown	10	bailed dry
1712	--	4.5	--	--	--	--	turbid/light brown	10	bailed dry
1730	--	5.0	--	--	--	--	turbid/light brown	10	bailed dry
1744	--	5.3	--	--	--	--	turbid/light brown	10	bailed dry
0800	--	7.0	--	--	--	--	slightly turbid	10-20	bailed dry
0840	--	7.5	--	--	--	--	slightly turbid	5	bailed dry
1009	--	8.0	--	--	--	--	slightly turbid	3	bailed dry
1042	--	8.3	--	--	--	--	slightly turbid	3	bailed dry

COMMENTS/OBSERVATIONS: BK Hand Pump sealed shut. Silty sand in bottom of bucket after first 6 gallons; appears to be a mixture of filter pack and formation. Silt sediment is sticky and rolls into 3/8 in. roll when wet. Appears similar to cuttings from BW108.

Monitoring Well Development Log

Page 2 of 3

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date Started (yr/mo/day) 90/9/5 Date Completed (yr/mo/day) 90/9/24
Field Personnel Rob Enright, Joe Harrigan, Kevin Degroot (AT&E)
Site Name Medley Farm RI/FS - Phase II
SEC Job # G-8026
Well ID # SW108
 Upgradient X Downgradient
Weather Conditions Sunny, Hot, Humid
Air Temperature 31.0 °C

Total Well Depth (TWD) = 21.62 TOC 1/100 ft
Depth to Ground Water (DGW) = 7.86 TOC 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 13.76 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 2.24 gallons
5 Casing Volumes = 11.21 gallons
Method of Well Development Bralnard-Kilman Hand Pump and Teflon
Baller
Total Volume of Water Removed 33.0 gallons

Date/Time 9/6/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1200	0.5	9.0	--	--	--	--	slightly turbid	3	balled dry
1300	--	10.0	--	--	--	--	slightly turbid	3	balled dry
1535	--	11.0	--	--	--	--	slightly turbid	3	balled dry
1645	--	11.5	--	--	--	--	slightly turbid	2	balled dry
1820	--	12.0	--	--	--	--	slightly turbid	2	balled dry
9/7/90	--	15.0	--	--	--	--	slightly turbid	2	balled dry
9/10/0935	--	16.8	--	--	--	--	slightly turbid	2	balled dry
1745	--	19.3	--	--	--	--	slightly turbid	2	balled dry
9/11/0710	--	21.5	--	--	--	--	slightly turbid	2	balled dry
9/12/0924	--	23.5	--	--	--	--	slightly turbid	2	balled dry

COMMENTS/OBSERVATIONS: _____

Monitoring Well Development Log

Page 3 of 3

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date Started (yr/mo/day) 90/9/21 Date Completed (yr/mo/day) 90/9/24

Field Personnel Joey Gillespie, John Haramut

Site Name Medley Farm RI/FS - Phase II

SEC Job # G-8026

Well ID # SW108

☐ Upgradient ☒ Downgradient

Weather Conditions Partly Cloudy and Warm

Air Temperature 32 °C

Total Well Depth (TWD) = 21.62 TOC 1/100 ft

Depth to Ground Water (DGW) = 7.86 TOC 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 13.76 1/100 ft

1 Casing Volume (OCV) = LWC x 0.163 = 2.24 gallons

5 Casing Volumes = 11.21 gallons

Method of Well Development Brainard-Kilman Hand Pump and Teflon Bailer

Total Volume of Water Removed 33.0 gallons

Date/Time 9/21/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1216	--	26.5	14.0	9.15	--	908	slight/tan	--	balled dry
1243	--	27.0	14.0	9.18	--	1072	slight/tan	--	balled dry
9/24/1103	--	27.2	13.0	6.83	--	100.5	clear	0	first bailer
1114	--	29.5	13.5	6.93	--	86.6	moderate/ light brown	1	balled dry at ~ 2.5 gal
1409	--	32.0	14.0	8.82	--	89.3	moderate/ brown	3	balled dry at 5.0 gal
1539	--	33.0	14.0	8.78	--	81.3	slight/light brown	1	balled dry at ~ 6.0 gal
									final sample

COMMENTS/OBSERVATIONS: A total of 30 gallons was removed prior to measuring parameters to remove the quantity introduced during well installation.

Monitoring Well Development Log

Page 1 of 2

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date Started (yr/mo/day) 90/9/25 Date Completed (yr/mo/day) 90/9/25
Field Personnel John Haramut
Site Name Medley Farm RI/FS - Phase II
SEC Job # G-8026
Well ID # SW109
 Upgradient X Downgradient
Weather Conditions Clear, Cool
Air Temperature 10-30 °C

Total Well Depth (TWD) = 62.61 TOC 1/100 ft
Depth to Ground Water (DGW) = 52.89 TOC 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 9.72 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 1.58 gallons
5 Casing Volumes = 7.92 gallons
Method of Well Development Brainard-Kilman Hand Pump, surging with baller, Teflon Baller
Total Volume of Water Removed 78.0 gallons

Date/Time 9/25/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
0851	0.25	5	9.5	7.85	--	157.1	very/brown	5	
0909	0.28	10	11	7.31	--	122.9	very/brown	5	
0922	0.38	15	11.5	7.10	--	111.1	very/brown	3-5	
1016	0.40	20	12	7.07	--	104.8	very/brown	3	
1029	0.38	25	12	7.00	--	91.5	very/brown	1-3	
1043	0.36	30	12	6.92	--	87.7	very/brown	1-3	see comment
1105	0.36	38	12	6.87	--	84.7	very/brown	1-3	
1409	0.35	43	NA	6.97	--	112.2	very/brown	1-3	surging with baller
1426	0.29	48	NA	6.89	--	93.9	very/brown	1-3	surging with baller
1456	0.36	53	NA	6.84	--	94.6	very/brown	<1	surging with baller

COMMENTS/OBSERVATIONS: Approximately 30 gallons is equal to the amount of water introduced into the borehole during well installation.

Monitoring Well Development Log

Page 2 of 2

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date Started (yr/mo/day) 90/9/25 Date Completed (yr/mo/day) 90/9/25

Field Personnel John Haramut

Site Name Medley Farm RI/FS - Phase II

SEC Job # G-8026

Well ID # SW109

☐ Upgradient ☒ Downgradient

Weather Conditions Clear, Cool

Air Temperature 10-30 °C

Total Well Depth (TWD) = 62.61 TOC 1/100 ft

Depth to Ground Water (DGW) = 52.89 TOC 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 9.72 1/100 ft

1 Casing Volume (OCV) = LWC x 0.163 = 1.58 gallons

5 Casing Volumes = 7.92 gallons

Method of Well Development Bralnard-Kilman Hand Pump, surging
with bailer, Teflon Bailer

Total Volume of Water Removed 78.0 gallons

Date/Time 9/25/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1516	0.25	58	NA	6.80	--	88.2	moderate/ light brown	3-5	surging with bailer
1559	0.32	63	NA	6.87	--	105.0	moderate/ light brown	3	surging with bailer
1612	0.38	68	NA	6.79	--	84.4	moderate/ light brown	1-3	surging with bailer
1711	0.38	73	NA	6.86	--	84.4	moderate/ light brown	1	surging with bailer
1724	0.32	78	NA	6.96	--	91.6	moderate/ light brown	1	surging with bailer

COMMENTS/OBSERVATIONS: _____

Monitoring Well Development Log

Page 1 of 2

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date Started (yr/mo/day) 89/7/6 Date Completed (yr/mo/day) 89/7/6
Field Personnel M. WARD
Site Name MEDLEY FARMS GAFFNEY, SC
SEC Job # G-8026
Well ID # BW-1
☒ Upgradient ☐ Downgradient
Weather Conditions OVERCAST
Air Temperature 26.5 °C

Total Well Depth (TWD) = 96.5 TOC 1/100 ft
Depth to Ground Water (DGW) = 51.16 TOC 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 45.38 1/100 ft
1 Casing Volume (OCV) = LWC x .653 = 29.61 gallons
5 Casing Volumes = 148.05 gallons
Method of Well Development GRUNDFOS SUBMERSIBLE PUMP
Total Volume of Water Removed 1054.30 gallons

Date/Time	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1355	7.5	147.7	18.1	6.62		99	clear	0	
1408	7.6	245.4	17.2	6.50		80	clear	0	
1430	8.0	421.4	17.9	6.43		89	clear	0	water level: 58.50 ft.
1441	5.1	477.4	18.0	6.30		89	clear	0	water level: 58.82 ft.
1454	7.6	576.4	18.0	6.12		89	clear	0	
1508	8.3	692.4	17.9	5.95		87	clear	0	water level: 59.00 ft.
1518	6.7	759.4	17.9	6.03		85	clear	0	
1530	7.0	843.4	17.8	6.06		85	clear	0	
1537	7.1	893.4	17.7	5.96		83	clear	0	water level: 59.32 ft.
1551	7.1	992.4	17.9	5.60		84	clear	0	

COMMENTS/OBSERVATIONS: Pump set at 80 ft. Totalizer=37154.6 gallons when pump started.

Monitoring Well Development Log

Page 2 of 2

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date Started (yr/mo/day) 89/7/6 Date Completed (yr/mo/day) 89/7/6

Field Personnel M. WARD

Site Name MEDLEY FARMS GAFFNEY, SC

SEC Job # G-8026

Well ID # BW-1

X Upgradient Downgradient

Weather Conditions OVERCAST

Air Temperature _____ 26.5 °C

Total Well Depth (TWD) =	96.5	TOC	1/100 ft
Depth to Ground Water (DGW) =	51.16	TOC	1/100 ft
Length of Water Column (LWC) = TWD - DGW =	45.38		1/100 ft
1 Casing Volume (OCV) = LWC x .653 =	29.61		gallons
5 Casing Volumes =	148.05		gallons
Method of Well Development	GRUNDFOS SUBMERSIBLE PUMP		
Total Volume of Water Removed	1054.30		gallons

[illegible]

COMMENTS/OBSERVATIONS: Totalizer=38208.9 gallons when pump started.

Monitoring Well Development Log

Page 1 of 3

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date Started (yr/mo/day) 89/8/3 Date Completed (yr/mo/day) 89/8/3

Field Personnel D. DETWILER

Site Name MEDLEY FARMS GAFFNEY, SC

SEC Job # G-8026

Well ID # BW-2

☐ Upgradient ☒ Downgradient

Weather Conditions CLEAR

Air Temperature 21 °C

Total Well Depth (TWD) = 85.00 TOC 1/100 ft

Depth to Ground Water (DGW) = 65.01 TOC 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 19.99 1/100 ft

1 Casing Volume (OCV) = LWC x .163 = 13.03 gallons

5 Casing Volumes = 65.17 gallons

Method of Well Development SUBMERSIBLE BLADDER PUMP

Total Volume of Water Removed 530 gallons

Date/Time	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
0700	.90	10	17.3	7.92		124	clear	0	
0747	.90	25	17.3	6.97		69	clear	0	
0813	.90	50	17.4	6.60		67	clear	0	
1202	.90	55	17.9	7.66		79	clear	0	
1233	.90	85	17.5	6.29		66	clear	0	
1249	.90	100	18.0	6.14		66	clear	0	
1259	.90	110	18.4	6.15		64	clear	0	
1320	.90	125	18.4	6.01		66	clear	0	
1418	.90	175	18.8	6.64		71	clear	0	
1456	.90	200	18.4	5.96		68	clear	0	

COMMENTS/OBSERVATIONS: _____

Monitoring Well Development Log

Page 2 of 3

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date Started (yr/mo/day) 89/8/3 Date Completed (yr/mo/day) 89/8/3
Field Personnel D. DETWILER
Site Name MEDLEY FARMS GAFFNEY, SC
SEC Job # G-8026
Well ID # BW-2
☐ Upgradient ☒ Downgradient
Weather Conditions CLEAR
Air Temperature 35 °C

Total Well Depth (TWD) = 85.00 TOC 1/100 ft
Depth to Ground Water (DGW) = 65.01 TOC 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 19.99 1/100 ft
1 Casing Volume (OCV) = LWC x .163 = 13.03 gallons
5 Casing Volumes = 65.17 gallons
Method of Well Development SUBMERSIBLE BLADDER PUMP
Total Volume of Water Removed 550 gallons

Date/Time	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1518	.90	225	18.6	5.9		65	clear	0	
1602	.90	250	18.4	6.04		70	clear	0	
1626	.90	275	18.7	6.16		65	clear	0	
1719	.90	300	18.9	6.01		69	clear	0	
1751	.90	350	18.7	5.92		86	clear	0	
1828	.90	400	18.1	5.83		69	clear	0	
1910	.90	425	18.5	6.51		69	clear	0	
1933	.90	450	19.0	5.94		68	clear	0	
2015	.90	475	18.4	5.96		69	clear	0	
2043	.90	500	18.6	6.13		67	clear	0	

COMMENTS/OBSERVATIONS: _____

Monitoring Well Development Log

Page 3 of 3

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date Started (yr/mo/day) 89/8/3 Date Completed (yr/mo/day) 89/8/3
Field Personnel D. DETWILER
Site Name MEDLEY FARMS GAFFNEY, SC
SEC Job # G-8026
Well ID # BW-2
 Upgradient X Downgradient
Weather Conditions CLEAR
Air Temperature 29.5 °C

Total Well Depth (TWD) = 85.00 TOC 1/100 ft
Depth to Ground Water (DGW) = 65.01 TOC 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 19.99 1/100 ft
1 Casing Volume (OCV) = LWC x .163 = 13.03 gallons
5 Casing Volumes = 65.17 gallons
Method of Well Development SUBMERSIBLE BLADDER PUMP
Total Volume of Water Removed 550 gallons

Date/Time	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
2130	.90	525	18.4	5.93		69	clear	0	
2113	.90	550	18.9	6.01		66	clear	0	

COMMENTS/OBSERVATIONS: _____

Monitoring Well Development Log

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Page 1 of 1

Date Started (yr/mo/day) 89/8/1 Date Completed (yr/mo/day) 89/8/1

Field Personnel R. J. HUNT

Site Name MEDLEY FARMS GAFFNEY, SC

SEC Job # G-8026

Well ID # BW-3

☐ Upgradient ☒ Downgradient

Weather Conditions OVERCAST, HUMID

Air Temperature 33 °C

Total Well Depth (TWD) = 55.0 (TOC) 1/100 ft

Depth to Ground Water (DGW) = 4.97 (TOC) 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 50.03 1/100 ft

1 Casing Volume (OCV) = LWC x .653 = 32.67 gallons

5 Casing Volumes = 163.35 gallons

Method of Well Development GRUNDFOS SUBMERSIBLE PUMP

Total Volume of Water Removed 1131.2 gallons

Date/Time	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1430	--	--	--	--		--	--	--	meter reading: 41464.0 gals.
1440	6.50	65.0	17.5	7.81		178	clear	0	
1450	3.47	99.7	17.1	7.66		140	clear	0	
1500	5.51	154.8	17.2	7.47		141	clear	0	
1520	5.44	263.6	17.0	7.38		129	clear	0	
1533	5.27	331.7	--	--		--	--	--	generator out of gas
1650	4.80	672.0	17.0	7.18		134	clear	0	
1710	5.42	780.4	17.0	7.22		128	clear	0	
1815	5.40	1131.2	17.0	7.25		126	clear	0	meter reading: 42595.2 gals.

COMMENTS/OBSERVATIONS: _____

Monitoring Well Development Log

Page 1 of 2

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date Started (yr/mo/day) 89/7/27 Date Completed (yr/mo/day) 89/8/1

Field Personnel R. J. HUNT

Site Name MEDLEY FARMS GAFFNEY, SC

SEC Job # G-8026

Well ID # BW-4

☐ Upgradient ☒ Downgradient

Weather Conditions OVERCAST, HUMID

Air Temperature 32 °C

Total Well Depth (TWD) = 31.0 (TOC) 1/100 ft

Depth to Ground Water (DGW) = 3.43 (TOC) 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 27.57 1/100 ft

1 Casing Volume (OCV) = LWC x .653 = 18.0 gallons

5 Casing Volumes = 90.0 gallons

Method of Well Development GRUNDFOS SUBMERSIBLE PUMP

Total Volume of Water Removed 202.9 gallons

Date/Time	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
7/27/89 1410	--	--	--	--		--	--		meter reading: 577.0 gals.
1414	2.5	10.0	19.3	8.18		260	clear	0	
1422	1.2	20.0	18.9	8.31		230	clear	0	
1430	1.2	30.0	18.6	7.83		236	clear	0	
1445	1.2	48.0	19.0	7.80		240	clear	0	
1504	1.0	67.0	18.6	7.82		242	clear	0	
1514	1.2	79.0	18.1	7.72		236	clear	0	
8/1/89 1030	--	--	--	--		--	--	--	meter reading: 41340.1 gals.
1049	--	11.2	18.2	7.68		225	clear	0	

COMMENTS/OBSERVATIONS: _____

Monitoring Well Development Log

Page 2 of 2

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date Started (yr/mo/day) 89/7/27 Date Completed (yr/mo/day) 89/8/1

Field Personnel R. J. HUNT

Site Name MEDLEY FARMS GAFFNEY, SC

SEC Job # G-8026

Well ID # BW-4

☐ Upgradient ☒ Downgradient

Weather Conditions OVERCAST, HUMID

Air Temperature 32 °C

Total Well Depth (TWD) = 31.0 (TOC) 1/100 ft

Depth to Ground Water (DGW) = 3.43 (TOC) 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 27.57 1/100 ft

1 Casing Volume (OCV) = LWC x .653 = 18.0 gallons

5 Casing Volumes = 90.0 gallons

Method of Well Development GRUNDFOS SUBMERSIBLE PUMP

Total Volume of Water Removed 202.9 gallons

Date/Time	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
8/1/89 1100	1.28	25.3	18.0	7.67		226	clear	0	
1110	1.31	38.3	18.0	7.63		228	clear	0	
1130	1.26	63.5	17.8	7.61		232	clear	0	
1150	1.22	87.8	17.9	7.63		236	clear	0	
1210	1.21	111.9	17.8	7.65		234	clear	0	
1220	1.20	123.9	18.0	7.58		238	clear	0	meter reading: 41464.0 gals.

COMMENTS/OBSERVATIONS: _____

Monitoring Well Development Log

Page 1 of 4

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date Started (yr/mo/day) 90/10/8 Date Completed (yr/mo/day) 90/10/11

Field Personnel Joey Gillespie, Richard Burdine

Site Name Medley Farm RI/FS - Phase II

SEC Job # G-8026

Well ID # BW105

☐ Upgradient ☒ Downgradient

Weather Conditions Clear, Hot

Air Temperature 26.7-29.4 °C

Total Well Depth (TWD) = 110.00 TOC 1/100 ft

Depth to Ground Water (DGW) = 56.00 TOC 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 54.00 1/100 ft

1 Casing Volume (OCV) = LWC x 0.67 = 36.18 gallons

5 Casing Volumes = 180.90 gallons

Method of Well Development ISCO Bladder Pump

Total Volume of Water Removed 192.0 gallons

Date/Time 10/8/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1503	1.0	20.0	18-19	11.33	--	752	clear	--	
1556	0.1	25.0	18-19	11.13	--	429	cloudy/grout color	--	
1631	0.1	30.0	18-19	10.54	--	272	cloudy/clear	--	
1650	0.2	35.0	18-19	10.28	--	258	cloudy	--	
10/9/0753	--	40.0	18-19	9.80	--	208	cloudy	--	
0804	0.5	45.0	18-19	9.90	--	207	cloudy	--	
0823	0.3	50.0	18-19	10.04	--	202	clear	--	pumped dry
0850	0.2	55.0	18-19	9.79	--	205	clear	--	pumped dry
0935	0.1	60.0	18-19	9.56	--	202	clear	--	pumped dry
1011	0.1	65.0	18-19	9.54	--	208	clear	--	pumped dry

COMMENTS/OBSERVATIONS: _____

Monitoring Well Development Log

Page 2 of 4

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date Started (yr/mo/day) 90/10/8 Date Completed (yr/mo/day) 90/10/11

Field Personnel Joey Gillespie, Richard Burdine

Site Name Medley Farm RI/FS - Phase II

SEC Job # G-8026

Well ID # BW105

☐ Upgradient ☒ Downgradient

Weather Conditions Clear, Hot

Air Temperature 26.7-29.4 °C

Total Well Depth (TWD) = 110.00 TOC 1/100 ft

Depth to Ground Water (DGW) = 56.00 TOC 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 54.00 1/100 ft

1 Casing Volume (OCV) = LWC x 0.67 = 36.18 gallons

5 Casing Volumes = 180.90 gallons

Method of Well Development ISCO Bladder Pump

Total Volume of Water Removed 192.0 gallons

Date/Time 10/9/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1025	0.4	70.0	18-19	10.04	--	234	clear	--	
1107	0.4	75.0	18-19	9.30	--	210	clear	--	
1311	--	80.0	18-19	9.03	--	203	clear	--	
1328	0.3	85.0	18-19	8.99	--	197.5	clear	--	erroneous conductivity/reading
1343	0.3	90.0	18-19	9.58	--	208	clear	--	
1359	0.3	95.0	18-19	9.22	--	205	clear	--	
1425	0.2	100.0	18-19	9.27	--	211	clear	--	
1623	0.1	110.0	18-19	9.58	--	222	slightly turbid	--	
10/10/0950	--	120.0	18-19	8.92	--	205	slightly turbid	--	
1057	0.2	135.0	18-19	8.63	--	179.6	slightly turbid	--	

COMMENTS/OBSERVATIONS: _____

Monitoring Well Development Log

Page 3 of 4

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date Started (yr/mo/day) 90/10/8 Date Completed (yr/mo/day) 90/10/11

Field Personnel Joey Gillespie, Richard Burdine

Site Name Medley Farm RI/FS - Phase II

SEC Job # G-8026

Well ID # BW105

☐ Upgradient ☒ Downgradient

Weather Conditions Clear, Hot

Air Temperature 26.7-29.4 °C

Total Well Depth (TWD) = 110.00 TOC 1/100 ft

Depth to Ground Water (DGW) = 56.00 TOC 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 54.00 1/100 ft

1 Casing Volume (OCV) = LWC x 0.67 = 36.18 gallons

5 Casing Volumes = 180.90 gallons

Method of Well Development ISCO Bladder Pump

Total Volume of Water Removed 192.0 gallons

Date/Time 10/10/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1130	0.2	140.0	18-19	8.43	--	177.2	slightly turbid	--	
1151	0.2	145.0	18-19	9.12	--	186.8	slightly turbid	--	
1415	--	150.0	18-19	7.97	--	183.2	clear	--	
1514	0.1	155.0	18-19	7.43	--	179.0	clear	--	
10/11/0817	--	160.0	18-19	6.96	--	167.3	clear	--	
0822	1.0	165.0	18-19	7.23	--	166.4	clear	--	
0838	0.3	170.0	18-19	8.40	--	177.3	clear	--	
0853	0.2	173.0	18-19	8.97	--	184.1	clear	--	
0913	0.4	178.0	18-19	7.84	--	175.5	clear	--	
0921	0.3	180.0	18-19	7.55	--	168.0	clear	--	pumped dry

COMMENTS/OBSERVATIONS: _____

Monitoring Well Development Log

Page 4 of 4

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date Started (yr/mo/day) 90/10/8 Date Completed (yr/mo/day) 90/10/11

Field Personnel Joey Gillespie, Richard Burdine

Site Name Medley Farm RI/FS - Phase II

SEC Job # G-8026

Well ID # BW105

☒ Upgradient ☐ Downgradient

Weather Conditions Clear, Hot

Air Temperature 26.7-29.4 °C

Total Well Depth (TWD) = 110.00 TOC 1/100 ft

Depth to Ground Water (DGW) = 56.00 TOC 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 54.00 1/100 ft

1 Casing Volume (OCV) = LWC x 0.67 = 36.18 gallons

5 Casing Volumes = 180.90 gallons

Method of Well Development ISCO Bladder Pump

Total Volume of Water Removed 192.0 gallons

Date/Time 10/11/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
0945	0.1	182.0	18-19	8.58	--	185.3	clear	--	
0950	0.6	185.0	18-19	7.45	--	155.7	clear	--	
0956	0.5	188.0	18-19	7.14	--	163.9	clear	--	
1000	0.5	190.0	18-19	7.10	--	155.7	clear	--	
1004	0.5	192.0	18-19	7.02	--	159.6	clear	--	last reading

COMMENTS/OBSERVATIONS: _____

Monitoring Well Development Log

Page 1 of 1

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date Started (yr/mo/day) 90/9/27 Date Completed (yr/mo/day) 90/9/27

Field Personnel Joey Gillespie

Site Name Medley Farm RI/FS - Phase II

SEC Job # G-8026

Well ID # BW106

☐ Upgradient ☒ Downgradient

Weather Conditions Clear

Air Temperature 15.0 °C

Total Well Depth (TWD) = 80.60 TOC 1/100 ft

Depth to Ground Water (DGW) = +3.00 Artesion Flow 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 83.60 1/100 ft

1 Casing Volume (OCV) = LWC x 2.12 = 177.23 gallons

5 Casing Volumes = 886.16 gallons

Method of Well Development Submersible Pump & Flow Meter

Total Volume of Water Removed 940 gallons

Date/Time 9/27/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
0800	--	--	14-15	6.45	--	114.9	slight/clear	--	
0818	10.0	180	14.7	6.85	--	94.9	slight/clear	--	
0837	9.5	360	13.6	6.73	--	101.4	slight/clear	--	
0859	9.5	568	14.2	6.92	--	91.9	slight/clear	--	
0919	9.6	760	14.9	6.73	--	95.2	clearing	--	
0937	10.0	940	16.2	6.81	--	103.0	clearing	--	

COMMENTS/OBSERVATIONS: _____

Monitoring Well Development Log

Page 1 of 2

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date Started (yr/mo/day) 90/9/21 Date Completed (yr/mo/day) 90/9/24
Field Personnel Joey Gillespie, John Haramut
Site Name Medley Farm RI/FS - Phase II
SEC Job # G-8026
Well ID # BW108
 Upgradient X Downgradient
Weather Conditions Partly Cloudy, and Warm
Air Temperature 32 °C

Total Well Depth (TWD) = 96.39 TOC 1/100 ft
Depth to Ground Water (DGW) = 4.40 TOC 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 91.99 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 61.63 gallons
5 Casing Volumes = 308.17 gallons
Method of Well Development Grundfos Submersible Pump
Total Volume of Water Removed 622.9 gallons

Date/Time 9/21/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1140	2.0	53	16.0	12.00	--	146.0	clear	--	
1210	2.0	57	16.0	11.60	--	676	clear	--	
1219	2.0	73	16.0	11.39	--	445	clear	--	
1237	2.0	93	16.0	11.31	--	370	clear	--	
1238	4.5	109	16.0	11.62	--	702	clear	--	
1246	4.5	137	16.0	11.36	--	373	clear	--	
1253	3.5	171	15.0	11.01	--	274	clear	--	
1304	3.5	191	15.0	10.45	--	215	clear	--	
9/24/1346	2.0	297.2	13.5	10.68	--	200.9	clear	0	
1418	2.1	360.9	14.0	10.30	--	171.6	clear	0	

COMMENTS/OBSERVATIONS: _____

Monitoring Well Development Log

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Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date Started (yr/mo/day) 90/9/21 Date Completed (yr/mo/day) 90/9/24
Field Personnel Joey Gillespie, John Haramut
Site Name Medley Farm RI/FS - Phase II
SEC Job # G-8026
Well ID # BW108
 Upgradient ☒ Downgradient
Weather Conditions Clear, Cool
Air Temperature 32 °C

Total Well Depth (TWD) = 96.39 TOC 1/100 ft
Depth to Ground Water (DGW) = 4.40 TOC 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 91.99 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 61.63 gallons
5 Casing Volumes = 308.17 gallons
Method of Well Development Grundfos Submersible Pump
Total Volume of Water Removed 622.9 gallons

Date/Time 9/24/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1447	2.18	421.8	14.0	10.19	--	173.5	clear	0	particulate matter in suspension
1517	2.09	482.7	14.0	10.02	--	166.5	clear	0	
1547	2.01	543.6	14.0	9.82	--	160.1	clear	0	
1618	2.01	604.5	14.0	9.95	--	167.2	clear	0	final sample

COMMENTS/OBSERVATIONS: Overpumped well after final sample taken. Total volume purged is 622.9 gallons.

Monitoring Well Development Log

Page 1 of 3

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date Started (yr/mo/day) 90/10/3 Date Completed (yr/mo/day) 90/10/3
Field Personnel Joey Gillespie, Richard Burdine
Site Name Medley Farm RI/FS - Phase II
SEC Job # G-8026
Well ID # BW109
 Upgradient X Downgradient
Weather Conditions Partly Cloudy
Air Temperature 18.3-21.1 °C

Total Well Depth (TWD) = 92.32 TOC 1/100 ft
Depth to Ground Water (DGW) = 52.40 TOC 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 39.92 1/100 ft
1 Casing Volume (OCV) = LWC x 0.67 = 26.75 gallons
5 Casing Volumes = 133.73 gallons
Method of Well Development Grundfos Submersible Pump
Total Volume of Water Removed 794.5 gallons

Date/Time 10/3/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
0942	1.0	5.0	18.0	11.33	--	523.0	clear	--	pump turned on
0954	1.2	20.0	18.0	10.25	--	207.8	clear	--	
0959	1.2	26.0	18.0	--	--	--	clear	--	
1005	1.3	34.0	18.0	9.02	--	135.4	clear	--	
1023	1.4	56.0	18.0	8.45	--	117.4	clear	--	
1042	1.9	91.5	18.0	8.18	--	124.6	clear	--	
1100	2.4	134.0	18.0	8.03	--	108.1	clear	--	
1152	2.4	256.5	18.0	7.91	--	106.8	clear	--	
1228	2.5	347.0	18.0	7.94	--	100.7	clear	--	
1234	2.5	362.0	18.0	--	--	--	clear	--	pump turned off

COMMENTS/OBSERVATIONS: _____

Monitoring Well Development Log

Page 2 of 3

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date Started (yr/mo/day) 90/10/3 Date Completed (yr/mo/day) 90/10/3

Field Personnel Joey Gillespie, Richard Burdine

Site Name Medley Farm RI/FS - Phase II

SEC Job # G-8026

Well ID # BW109

☐ Upgradient ☒ Downgradient

Weather Conditions Clear

Air Temperature 18.3-21.1 °C

Total Well Depth (TWD) = 92.32 TOC 1/100 ft

Depth to Ground Water (DGW) = 52.40 TOC 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 39.92 1/100 ft

1 Casing Volume (OCV) = LWC x 0.67 = 26.75 gallons

5 Casing Volumes = 133.73 gallons

Method of Well Development Grundfos Submersible Pump

Total Volume of Water Removed 794.5 gallons

Date/Time 10/3/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
1504	4.0	368.0	18.0	--	--	--	clear	--	
1508	5.0	388.0	18.0	7.83	--	150.6	clear	--	
1518	1.5	402.5	18.0	7.74	--	112.2	clear	--	
1543	4.0	502.5	18.0	6.62	--	101.7	clear	--	
1614	4.0	626.5	18.0	--	--	--	clear	--	
1622	4.0	650.5	19.5	6.62	--	103.5	clear	--	
1628	4.0	674.5	19.5	6.62	--	101.6	clear	--	
1634	4.0	698.5	19.5	6.59	--	96.8	clear	--	
1640	4.0	722.5	19.5	6.58	--	96.0	clear	--	
1646	4.0	746.5	19.5	6.60	--	97.2	clear	--	

COMMENTS/OBSERVATIONS: At 1622, 650 water pressure test.

Monitoring Well Development Log

Page 3 of 3

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date Started (yr/mo/day) 90/10/3 Date Completed (yr/mo/day) 90/10/3

Field Personnel Joey Gillespie, Richard Burdine

Site Name Medley Farm RI/FS - Phase II

SEC Job # G-8026

Well ID # BW109

 Upgradient X Downgradient

Weather Conditions Clear

Air Temperature 18.3-21.1 °C

Total Well Depth (TWD) =	<u>92.32</u>	TOC	<u>1/100 ft</u>
Depth to Ground Water (DGW) =	<u>52.40</u>	TOC	<u>1/100 ft</u>
Length of Water Column (LWC) = TWD - DGW =	<u>39.92</u>		<u>1/100 ft</u>
1 Casing Volume (OCV) = LWC x	<u>0.67</u>	=	<u>26.75</u> gallons
5 Casing Volumes =	<u>133.73</u>		gallons
Method of Well Development	<u>Grundfos Submersible Pump</u>		
<hr/>			
Total Volume of Water Removed			gallons

[illegible]

COMMENTS/OBSERVATIONS:

Monitoring Well Development Log

Page 1 of 3

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date Started (yr/mo/day) 90/10/1 Date Completed (yr/mo/day) 90/10/8
Field Personnel Joey Gillespie, Richard Burdine
Site Name Medley Farm RI/FS - Phase II
SEC Job # G-8026
Well ID # BW110
 Upgradient X Downgradient
Weather Conditions Cloudy, Drizzling Rain
Air Temperature 25.0 °C

Total Well Depth (TWD) = 85.63 TOC 1/100 ft
Depth to Ground Water (DGW) = 51.30 TOC 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 34.33 1/100 ft
1 Casing Volume (OCV) = LWC x 0.67 = 23.00 gallons
5 Casing Volumes = 115.01 gallons
Method of Well Development Grundfos Submersible Pump to purge
pressure test water and to develop
Total Volume of Water Removed 576.4 gallons

Date/Time 10/1/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
0815	1.0	14.0	19.0	11.99	--	2900	clear	--	
0818	2.0	20.0	--	--	--	--	--	--	pumped dry
0840	0.1	23.0	18.4	12.12	--	3320	clear	--	pumped dry
0922	0.2	31.7	18.1	11.57	--	721	clear	--	evacuated
0947	0.3	38.5	18.1	11.48	--	585	clear	--	
1400	--	51.5	18.6	11.64	--	685	clear	--	
1854	10.0	67.0	18.5	11.61	--	956	clear	--	pumped dry
10/2/0802	--	77.5	17.0	11.43	--	825	clear	--	
0807	2.0	87.5	17.6	11.82	--	1580	clear	--	pumped dry
0850	0.2	97.5	17.8	11.05	--	469	clear	--	

COMMENTS/OBSERVATIONS: _____

Monitoring Well Development Log

Page 2 of 3

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date Started (yr/mo/day) 90/10/1 Date Completed (yr/mo/day) 90/10/8

Field Personnel Joey Gillespie, Richard Burdine

Site Name Medley Farm RI/FS - Phase II

SEC Job # G-8026

Well ID # BW110

☐ Upgradient ☒ Downgradient

Weather Conditions Cloudy, Drizzling Rain

Air Temperature 25.0 °C

Total Well Depth (TWD) = 85.63 TOC 1/100 ft

Depth to Ground Water (DGW) = 51.30 TOC 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 34.33 1/100 ft

1 Casing Volume (OCV) = LWC x 0.67 = 23.00 gallons

5 Casing Volumes = 115.01 gallons

Method of Well Development Grundfos Submersible Pump to purge
pressure test water and to develop.

Total Volume of Water Removed 576.4 gallons

Date/Time	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
10/2/90									
0856	0.8	102.5	--	--	--	--	--	--	pumped dry
1327	3.0	112.5	19.7	10.39	--	297	clear	--	
1331	2.3	121.5	19.1	11.39	--	633	clear	--	pumped dry
1530	10.0	142.5	19.0	10.42	--	310	clear	--	pumped dry
10/4/1745	2.8	156.5	18.0	11.16	--	484	clear/cloudy	--	
10/5/0849	5.0-8.0	181.5	18.0	10.99	--	430	clear	5	
0905	1.0	--	18.0	11.18	--	467	clear	1	
0936	1.0	199.5	18.0	9.45	--	224	clear	--	
1300	0.6	349.5	18.0	7.11	--	226	clear	--	
1400	0.062	387.0	--	7.20	--	214	--	--	

COMMENTS/OBSERVATIONS: _____

Monitoring Well Development Log

Page 3 of 3

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date Started (yr/mo/day) 90/10/1 Date Completed (yr/mo/day) 90/10/8

Field Personnel Joey Gillespie, Richard Burdine

Site Name Medley Farm RI/FS - Phase II

SEC Job # G-8026

Well ID # BW110

☐ Upgradient ☒ Downgradient

Weather Conditions Cloudy

Air Temperature 23.9-26.7 °C

Total Well Depth (TWD) = 85.63 TOC 1/100 ft

Depth to Ground Water (DGW) = 51.30 TOC 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 34.33 1/100 ft

1 Casing Volume (OCV) = LWC x 0.67 = 23.00 gallons

5 Casing Volumes = 115.01 gallons

Method of Well Development Grundfos Submersible Pump, ISCO Bladder Pump

Total Volume of Water Removed 576.4 gallons

Date/Time 10/8/90	Discharge Rate (gpm)	Volume Purged (gallons)	Water Temperature (°C)	pH	Eh	Specific Conductivity (µmhos/cm)	Turbidity/Color	Sand Content (%)	Remarks
0814	0.7	402.0	--	9.82	--	242	--	--	
0921	0.6	443.0	--	6.78	--	203	clear	--	
1016	0.6	477.4	18.0	6.79	--	189.8	clear	--	
1112	0.6	512.4	18.0	7.01	--	214	clear	--	
1148	0.6	533.4	18.0	6.97	--	220	clear	--	
1221	0.7	555.4	18.0	6.93	--	219	clear	--	
1234	0.7	563.4	18.0	6.95	--	221	clear	--	
1254	0.7	576.4	18.0	6.95	--	219	clear	--	

COMMENTS/OBSERVATIONS: _____

APPENDIX G

GROUND WATER LEVEL MONITORING REPORT

GROUND WATER LEVEL MONITORING REPORT

PROJECT <u>Medley Farm RI/FS</u> LOCATION <u>Gaffney, S.C.</u> CLIENT <u>Medley Farm Steering Committee</u> DESCRIPTION OF MEASURING POINT <u>Top of PVC Casing</u> ELEVATION OF MEASURING POINT <u>690.47</u> SURVEY DATUM <u>N.G.V.D.</u>	JOB NUMBER <u>G-8026</u> INSTALLATION NUMBER <u>SW1</u> TYPE OF INSTALLATION <u>Saprolite Monitoring Well</u> LOCATION <u>See Plan</u>
--	---

DATE	TIME	DEPTH TO WATER FROM MEASURING POINT (FT)	ELEVATION OF WATER (FT)	REMARKS *	READ BY
6/15/89	--	52.4	638.07		R.L.B.
6/16/89	--	52.26	638.21		R.L.B.
7/5/89	--	52.1	638.37		R.L.B.
7/10/89	1417	51.98	638.49		R.L.B.
7/13/89	1625	51.95	638.52		R.L.B.
7/17/89	0820	51.95	638.52		R.L.B.
7/21/89	1157	51.95	638.52		R.L.B.
7/24/89	0752	51.95	638.52		R.J.H.
8/1/89	0945	51.92	638.55		R.J.H.
9/7/89	1504	53.93	636.54		R.L.B.
1/9/90	--	51.32	639.15		D.D.
1/20/90	--	51.12	639.35		R.L.B.
2/22/90	1340	50.5	639.97		D.D.
3/7/90	1311	50.24	640.23		J.W/R.B.
4/17/90	--	49.41	641.06		D.D.
7/3/90	--	48.9	641.57		D.D.
8/16/90	1634	49.41	641.06		B.R./J.A.H.
8/21/90	1425	49.50	640.97		R.B./R.E
8/30/90	1517	49.62	640.85		R.L.B.
9/21/90	0854	49.95	640.52		J.E.G.
9/27/90	1741	49.97	640.5		R.L.B.
10/19/90	0805	50.25	640.22		J.E.G.
10/30/90	1254	49.53	640.94		J.E.G.
11/15/90	--	50.19	640.28		D.D.

* INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.

GROUND WATER LEVEL MONITORING REPORT

PROJECT <u>Medley Farm RI/FS</u> LOCATION <u>Gaffney, S.C.</u> CLIENT <u>Medley Farm Steering Committee</u> DESCRIPTION OF MEASURING POINT <u>Top of PVC Casing</u> ELEVATION OF MEASURING POINT <u>671.56</u> SURVEY DATUM <u>N.G.V.D.</u>	JOB NUMBER <u>G-8026</u> INSTALLATION NUMBER <u>SW3</u> TYPE OF INSTALLATION <u>Saprolite Monitoring Well</u> LOCATION <u>See Plan</u>
--	---

DATE	TIME	DEPTH TO WATER FROM MEASURING POINT (FT)	ELEVATION OF WATER (FT)	REMARKS *	READ BY
7/10/89	1425	68.76	602.8		R.L.B.
7/13/89	1620	68.76	602.8		R.L.B.
7/17/89	826	68.8	602.76		R.L.B.
7/21/89	1210	68.85	602.71		R.L.B.
7/24/89	745	68.84	602.72		R.J.H.
7/26/89	1625	68.82	602.74		R.J.H.
7/31/89	945	68.82	602.74		R.J.H.
8/1/89	932	68.83	602.73		R.J.H.
8/9/89	—	66.96	604.6		D.D
9/7/89	1310	68.92	603.13		R.L.B.
1/9/90	—	68.43	603.13		D.D
1/20/90	—	68.24	603.32		R.L.B.
2/22/90	1500	67.78	603.78		D.D.
3/7/90	1315	67.69	603.87		J.W./R.B.
4/17/90	—	67.15	604.41		D.D.
7/3/90	—	66.81	604.75		D.D.
8/16/90	1704	66.91	604.65		B.R./J.A.H.
8/23/90	1044	66.90	604.66		R.L.B.
8/30/90	1556	66.92	604.64		R.L.B.
9/21/90	1043	67.10	604.46		J.E.G.
9/27/90	1558	67.09	604.47		R.L.B.
10/23/90	1154	67.10	604.46		J.E.G.
10/30/90	1308	67.18	604.38		J.E.G.
1/15/90	—	67.13	604.43		D.D

* INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.

GROUND WATER LEVEL MONITORING REPORT

PROJECT <u>Medley Farm RI/FS</u> LOCATION <u>Gaffney, S.C.</u> CLIENT <u>Medley Farm Steering Committee</u> DESCRIPTION OF MEASURING POINT _____ <u>Top of PVC Casing</u> ELEVATION OF MEASURING POINT <u>671.39</u> SURVEY DATUM <u>N.G.V.D.</u>	JOB NUMBER <u>G-8026</u> INSTALLATION NUMBER <u>SW4</u> TYPE OF INSTALLATION _____ <u>Saprolite Monitoring Well</u> LOCATION <u>See Plan</u>
---	--

DATE	TIME	DEPTH TO WATER FROM MEASURING POINT (FT)	ELEVATION OF WATER (FT)	REMARKS *	READ BY
7/17/89	836	60.88	610.51		R.L.B.
7/21/89	1215	60.86	610.53		R.L.B.
7/24/89	739	60.83	610.56		R.J.H.
7/26/89	1630	60.79	610.6		R.J.H.
8/1/89	940	60.78	610.61		R.J.H.
8/9/89	--	57.56	613.83		D.D.
9/7/89	1313	60.6	610.79		R.L.B.
1/9/90	--	60.27	611.12		D.D.
1/20/90	--	59.96	611.43		R.L.B.
2/22/90	1350	59.53	611.86		D.D.
3/7/90	1323	59.37	612.02		J.W./R.B.
4/17/90	--	58.3	613.09		D.D.
7/3/90	--	56.86	614.53		D.D.
8/16/90	1708	56.64	614.75		B.R./J.A.H.
8/23/90	1031	56.68	614.71		R.L.B.
8/30/90	1545	56.66	614.73		R.L.B.
9/21/90	1012	56.98	614.41		J.E.G.
9/27/90	1600	56.92	614.47		R.L.B.
10/23/90	1302	57.41	613.98		J.E.G.
10/30/90	1311	57.69	613.70		J.E.G.
11/15/90	--	57.88	613.51		D.D.

* INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.



GROUND WATER LEVEL MONITORING REPORT

[illegible]

* INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.



PROJECT	Medley Farm RI/FS	JOB NUMBER	G-8026
LOCATION	Gaffney, S.C.	INSTALLATION NUMBER	SW102
CLIENT	Medley Farm Steering Committee	TYPE OF INSTALLATION	Saprolite Monitoring Well
DESCRIPTION OF MEASURING POINT	Top of PVC Casing	LOCATION	See Plan
ELEVATION OF MEASURING POINT	620.07		
SURVEY DATUM	N.G.V.D.		

[illegible]

* INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.



PROJECT	Medley Farm RI/FS	JOB NUMBER	G-8026
LOCATION	Gaffney, S.C.	INSTALLATION NUMBER	SW103 (HP103)
CLIENT	Medley Farm Steering Committee	TYPE OF INSTALLATION	Saprolite Monitoring Well
DESCRIPTION OF MEASURING POINT	Top of PVC Casing	LOCATION	See Plan
ELEVATION OF MEASURING POINT	635.68		
SURVEY DATUM	N.G.V.D.		

[illegible]

* INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.



GROUND WATER LEVEL MONITORING REPORT

[illegible]

* INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.



GROUND WATER LEVEL MONITORING REPORT

[illegible]

* INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.



PROJECT	Medley Farm RI/FS	JOB NUMBER	G-8026
LOCATION	Gaffney, S.C.	INSTALLATION NUMBER	PZ101
CLIENT	Medley Farm Steering Committee	TYPE OF INSTALLATION	Permanent Piezometer
DESCRIPTION OF MEASURING POINT	Top of PVC Casing	LOCATION	See Plan
ELEVATION OF MEASURING POINT	688.49		
SURVEY DATUM	N.G.V.D.		

[illegible]

* INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.

GROUND WATER LEVEL MONITORING REPORT

PROJECT <u>Medley Farm RI/FS</u> LOCATION <u>Gaffney, S.C.</u> CLIENT <u>Medley Farm Steering Committee</u> DESCRIPTION OF MEASURING POINT <u>Top of PVC Casing</u> ELEVATION OF MEASURING POINT <u>689.90</u> SURVEY DATUM <u>N.G.V.D.</u>	JOB NUMBER <u>G-8026</u> INSTALLATION NUMBER <u>BW1</u> TYPE OF INSTALLATION <u>Bedrock Monitoring Well</u> LOCATION <u>See Plan</u>
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DATE	TIME	DEPTH TO WATER FROM MEASURING POINT (FT)	ELEVATION OF WATER (FT)	REMARKS *	READ BY
6/15/89		51.3	638.6		R.L.B.
6/19/89		51.33	638.57		R.L.B.
7/5/89		51.12	638.78		R.L.B.
7/10/89	1410	51.13	638.77		R.L.B.
7/13/89	1628	51.1	638.8		R.L.B.
7/17/89	817	51.13	638.77		R.L.B.
7/21/89	1158	51.14	638.76		R.L.B.
7/24/89	753	51.14	638.76		R.J.H.
8/1/89	947	51.12	638.78		R.J.H.
9/7/89	1506	51.15	638.75		R.L.B.
1/10/90		50.38	639.52		D.D.
1/20/90		50.36	639.54		R.L.B.
2/22/90	1340	49.66	640.24		D.D.
3/7/90	1309	49.42	640.48		J.W./R.B
4/17/90	--	48.52	641.38		D.D.
7/3/90	--	48.15	641.75		D.D.
8/16/90	1632	48.71	641.19		B.R./J.A.H.
8/21/90	1426	48.80	641.10		R.B./R.E.
8/23/90	0835	48.83	641.07		R.L.B.
8/30/90	1520	49.02	640.88		R.L.B.
9/21/90	0858	49.32	640.58		J.E.G.
9/27/90	1744	49.35	640.55		R.L.B.
10/19/90	0805	49.60	640.30		J.E.G.
10/30/90	1254	49.53	640.37		J.E.G.
1/15/90	--	49.48	640.42		D.D.

GROUND WATER LEVEL MONITORING REPORT

PROJECT <u>Medley Farm RI/FS</u> LOCATION <u>Gaffney, S.C.</u> CLIENT <u>Medley Farm Steering Committee</u> DESCRIPTION OF MEASURING POINT <u>Top of PVC Casing</u> ELEVATION OF MEASURING POINT <u>662.99</u> SURVEY DATUM <u>N.G.V.D.</u>	JOB NUMBER <u>G-8026</u> INSTALLATION NUMBER <u>BW2</u> TYPE OF INSTALLATION <u>Bedrock Monitoring Well</u> LOCATION <u>See Plan</u>
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DATE	TIME	DEPTH TO WATER FROM MEASURING POINT (FT)	ELEVATION OF WATER (FT)	REMARKS *	READ BY
7/31/89	810	66.47	596.52		R.J.H.
8/1/89	825	66.36	596.63		R.J.H.
8/8/89	1317	66.75	596.24		D.D.
9/7/89		66.98	596.01		R.L.B.
1/11/90		66.66	596.33		D.D.
1/20/90		66.64	596.35		R.L.B.
1/22/90	1525	65.93	597.06		D.D.
3/7/90	1319	65.6	597.39		J.W./R.B
4/17/90	—	64.84	598.15		D.D.
7/3/90	—	64.96	598.03		D.D.
8/16/90	1658	65.46	597.53		B.R./J.A.H.
8/23/90	1017	65.48	597.51		R.L.B.
8/30/90	1600	65.59	597.40		R.L.B.
9/21/90	1048	65.83	597.16		J.E.G.
9/27/90	1554	66.06	596.93		R.L.B.
10/23/90	1245	65.74	597.25		J.E.G.
10/30/90	1302	65.82	597.17		J.E.G.
1/15/90	—	65.88	597.11		D.D.

* INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.

GROUND WATER LEVEL MONITORING REPORT

PROJECT <u>Medley Farm RI/FS</u> LOCATION <u>Gaffney, S.C.</u> CLIENT <u>Medley Farm Steering Committee</u> DESCRIPTION OF MEASURING POINT <u>Top of PVC Casing</u> ELEVATION OF MEASURING POINT <u>574.82</u> SURVEY DATUM <u>N.G.V.D.</u>	JOB NUMBER <u>G-8026</u> INSTALLATION NUMBER <u>BW3</u> TYPE OF INSTALLATION <u>Bedrock Monitoring Well</u> LOCATION <u>See Plan</u>
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DATE	TIME	DEPTH TO WATER FROM MEASURING POINT (FT)	ELEVATION OF WATER (FT)	REMARKS *	READ BY
7/24/89	810	6.9	567.82		R.J.H.
7/26/89	1610	7.02	567.8		R.J.H.
8/1/89	850	6.72	568.1		R.J.H.
9/7/89	1338	6.99	567.83		M.W.
1/11/90		6.17	568.65		D.D.
1/20/90		6.16	568.66		R.L.B.
2/22/90	1548	5.93	568.89		D.D.
3/7/90	1213	6.13	568.69		J.W./R.B.
4/17/90	—	6.38	568.44		D.D.
7/3/90	—	7.03	567.79		D.D.
8/16/90	1651	7.46	567.36		B.R./J.A.H.
8/23/90	0953	7.26	567.56		R.L.B.
8/30/90	1453	7.21	567.61		R.L.B.
9/21/90	0938	7.20	567.62		J.E.G.
9/27/90	1534	7.20	567.62		R.L.B.
10/23/90	1212	6.70	568.12	Evidence of Flooding	J.E.G.
10/29/90	0950	6.38	568.44		J.E.G.
1/15/90	—	6.50	568.32		D.D.

* INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.

GROUND WATER LEVEL MONITORING REPORT

PROJECT <u>Medley Farm RI/FS</u> LOCATION <u>Gaffney, S.C.</u> CLIENT <u>Medley Farm Steering Committee</u> DESCRIPTION OF MEASURING POINT <u>Top of PVC Casing</u> ELEVATION OF MEASURING POINT <u>564.32</u> SURVEY DATUM <u>N.G.V.D.</u>	JOB NUMBER <u>G-8026</u> INSTALLATION NUMBER <u>BW4</u> TYPE OF INSTALLATION <u>Bedrock Monitoring Well</u> LOCATION <u>See Plan</u>
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DATE	TIME	DEPTH TO WATER FROM MEASURING POINT (FT)	ELEVATION OF WATER (FT)	REMARKS *	READ BY
7/21/89	1047	5.77	558.55		R.J.H.
7/24/89	815	5.81	558.51		R.J.H.
7/26/89	1620	5.91	558.41		R.J.H.
8/1/89	907	5.23	559.09		R.J.H.
8/8/89	1330	3.89	560.43		D.D.
9/7/89		5.84	558.48		R.L.B.
1/9/90		4.86	559.46		D.D.
1/20/90		5.06	559.26		R.L.B.
2/22/90	1535	4.78	559.54		D.D.
3/7/90	1044	5.23	559.09		J.W./R.B.
4/17/90	-	6.12	558.20		D.D.
7/3/90	-	5.43	558.89		D.D.
8/16/90	1644	6.32	558.00		B.R./J.A.H.
8/23/90	0942	6.14	558.18		R.L.B.
8/30/90	1448	6.02	558.30		R.L.B.
9/21/90	0918	5.87	558.45		J.E.G.
9/27/90	1525	5.84	558.48		R.L.B.
10/23/90	1228	4.52	559.80	Evidence of Flooding	J.E.G.
10/29/90	1001	5.24	559.08		J.E.G.
11/15/90	-	5.36	558.96		D.D.

* INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.



PROJECT	Medley Farm RI/FS	JOB NUMBER	G-8026
LOCATION	Gaffney, S.C.	INSTALLATION NUMBER	BW106
CLIENT	Medley Farm Steering Committee	TYPE OF INSTALLATION	Bedrock Monitoring Well
DESCRIPTION OF MEASURING POINT	Top of PVC Casing	LOCATION	See Plan
ELEVATION OF MEASURING POINT	595.76		
SURVEY DATUM	N.G.V.D.		

[illegible]

* INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.



PROJECT	Medley Farm RI/FS	JOB NUMBER	G-8026
LOCATION	Gaffney, S.C.	INSTALLATION NUMBER	BW108
CLIENT	Medley Farm Steering Committee	TYPE OF INSTALLATION	Bedrock Monitoring Well
DESCRIPTION OF MEASURING POINT	Top of PVC Casing	LOCATION	See Plan
ELEVATION OF MEASURING POINT	605.54		
SURVEY DATUM	N.G.V.D.		

[illegible]

* INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.



PROJECT	Medley Farm RI/FS Phase II	JOB NUMBER	G-8026
LOCATION	Gaffney, S.C.	INSTALLATION NUMBER	SL1
CLIENT	Medley Farm Steering Committee	TYPE OF INSTALLATION	Stream Level Station
DESCRIPTION OF MEASURING POINT	Top of Steel Rod	LOCATION	See Plan
ELEVATION OF MEASURING POINT	(Elev. prior to 10/23/90 567.85) Elev. after 10/23/90 is 568.01	ADJACENT	Adjacent BW3/PZ1
SURVEY DATUM	N.G.V.D.		

[illegible]

* INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.



GROUND WATER LEVEL MONITORING REPORT

[illegible]

* INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.



PROJECT	Medley Farm RI/FS Phase II	JOB NUMBER	G-8026
LOCATION	Gaffney, S.C.	INSTALLATION NUMBER	SL3
CLIENT	Medley Farm Steering Committee	TYPE OF INSTALLATION	Stream Gauge
DESCRIPTION OF MEASURING POINT	Top of Steel Rod	LOCATION	See Plan
ELEVATION OF MEASURING POINT	596.69		Adjacent BW/SW 106
SURVEY DATUM	N.G.V.D.		

[illegible]

* INDICATE ELAPSED TIME AFTER INSTALLATION, DEVELOPMENT OR PURGING, RECENT WEATHER, ETC.

APPENDIX H

HYDRAULIC TESTING DATA
(Water Pressure Test and Slug Test Data)

APPENDIX H
WATER PRESSURE TEST DATA

WATER PRESSURE TEST DATA REDUCTION

PAGE: 1 of 2

DATE: 2/5/90

CLIENT: Medley Farm Steering Committee						FILE NO.: G-8026						COMPUTED BY: R. L. Burdine					
PROJECT: Medley Farm RI/FS												CHECKED BY: R. L. Burdine					
BOR NO.	TEST NO.	TEST SECT. DEPTH RANGE (ft)	TEST SECT. LENGTH, (L) (ft)	D _{GWT} (ft)	D _{PG} (ft)	PRESSURE INCREMENT	GAUGE PRESSURE (P _{PG}) (psi)	GAUGE PRESSURE HEAD, (H _{PG}) (ft)	TOTAL DRIVING HEAD (H _T) (ft)	TOTAL DRIVING PRESSURE (P _T) (psi)	ΔV (gal)	Δt (min)	Q = ΔV / Δt (gal/min)	T = TAKE = Q / L (gal/min/ft)	T' = 0.13368 T	LV = 92.89 T' x 150 P _T	K _{equiv} (cm/sec)
BW2	1	65.00-85.00	20.00	65.05	7.25	Low	5.000	11.550	83.850	36.299	43.900	5	8.780	0.439	0.059	22.527	2.93 x 10 ⁻⁴
	1					Med.	10.000	23.100	95.400	41.299	47.300	5	9.460	0.473	0.063	21.333	2.77 x 10 ⁻⁴
	1					High	15.000	34.650	106.950	46.299	41.100	4	10.275	0.514	0.069	20.669	2.69 x 10 ⁻⁴
	1					Med.	10.000	23.100	95.400	41.299	36.300	4	9.075	0.454	0.061	20.465	2.66 x 10 ⁻⁴
	1					Low	5.000	11.550	83.850	36.299	25.600	4	6.400	0.320	0.043	16.420	2.13 x 10 ⁻⁴
BW3	1	35.00-55.00	20.00	5.15	7.58	Low	14.000	32.340	45.070	19.511	19.300	5	3.860	0.193	0.026	18.425	2.40 x 10 ⁻⁴
	1					Med.	29.000	66.990	79.720	34.511	35.500	5	7.100	0.355	0.047	19.160	2.49 x 10 ⁻⁴
	1					High	42.000	97.020	109.750	47.511	54.100	5	10.820	0.541	0.072	21.210	2.76 x 10 ⁻⁴
	1					Med.	28.000	64.680	77.410	33.511	38.500	5	7.700	0.385	0.051	21.399	2.78 x 10 ⁻⁴
	1					Low	14.000	32.340	45.070	19.511	28.100	5	5.620	0.281	0.038	26.826	3.49 x 10 ⁻⁴
BW4	1	18.00-31.00	13.00	3.80	5.20	Low	9.000	20.780	29.890	12.939	0.300	5	0.060	0.005	0.001	0.664	8.64 x 10 ⁻⁶
	1					Med.	16.000	36.960	46.060	19.939	0.000	5	0.000	0.000	0.000	0.000	0.00
	1					High	30.000	69.300	78.400	33.939	41.900	5	8.380	0.645	0.086	35.377	4.60 x 10 ⁻⁴
	1					Med.	17.000	39.270	48.370	20.939	20.300	5	4.060	0.312	0.042	27.781	3.61 x 10 ⁻⁴
	1					Low	8.000	18.480	27.580	11.939	0.500	5	0.100	0.008	0.001	1.200	1.56 x 10 ⁻⁵

LEGEND

- L = Length of section being tested.
- D_{GWT} = Depth to ground water from top of casing (reference point).
- D_{PG} = Distance to the highest point in the water pressure system from reference point.
- P_{PG} = The actual pressure read from the gauge during each pressure increment.
- H_{PG} = The head pressure at the gauge. This calculated by multiplying the gauge pressure (H_{PG}) by 2.31 feet/psi. (H_{PG} = P_{PG} x 2.31 (ft./psi))
- H_T = The total driving head in the system. This is calculated by adding together the depth to ground water (D_{GWT}), distance to the highest point in the system (D_{PG}), and the gauge pressure head (H_{PG}). (H_T = D_{GWT} + D_{PG} + H_{PG})
- P_T = The total driving pressure in the system. This is calculated by dividing the total driving head (H_T) by 2.31 ft./psi (P_T = H_T ÷ 2.31 (ft./psi))
- ΔV = The volume of water being introduced over a given period of time or pressure increment.
- Δt = The length of time of a specific pressure increment.
- Q = The amount of water introduced to the test zone over a specific period of time or pressure increment. This is calculated by dividing the volume of water introduced during a pressure increment (ΔV) by the length of time (Δt) for that pressure increment. (Q = ΔV / Δt)
- T = The amount of water introduced (Take) per minute per foot of the test zone. This is calculated by dividing Q by the length of the section being tested (T = Q/L).
- T' = A unitless figure derived by multiplying the Take (Q) by a constant established by Lugeon. (T' = 0.13368 x T).
- LV = The "Lugeon Value"
- K_{equiv} = Hydraulic conductivity value in centimeters per second. This is determined by converting the "Lugeon Value" by multiplying by 1.3 x 10⁻⁵ cm/sec. (K_{equiv} = LV x 1.3 x 10⁻⁵ cm/sec)

NOTE:

Highlighted hydraulic conductivities are considered to be the most representative based upon the interpretation of the Lugeon value pattern for low, medium, high, medium, and low pressure increments. By evaluating the pattern of the Lugeon values for a pressure test, information can be ascertained as to the type of water flow exhibited (i.e. wash-out, void filling, laminar, etc.) therefore allowing a logical decision to be made as to which stage is the most representative (Houlsby, 1976).

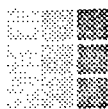
WATER PRESSURE TEST DATA REDUCTION

PAGE: 2 of 2

DATE: 11/5/90

CLIENT: Medley Farm Steering Committee						FILE NO.: G-8028						COMPUTED BY: R. L. Burdine					
PROJECT: Medley Farm RI/FS												CHECKED BY: R. L. Burdine					
BOR NO.	TEST NO.	TEST SECT. DEPTH RANGE (ft)	TEST SECT. LENGTH, (L) (ft)	D _{GWT} (ft)	D _{PG} (ft)	PRESSURE INCREMENT	GAUGE PRESSURE (P _{PG}) (psi)	GAUGE PRESSURE HEAD, (H _{PG}) (ft)	TOTAL DRIVING HEAD (H _T) (ft)	TOTAL DRIVING PRESSURE (P _T) (psi)	Δv (gal)	Δt (min)	Q=Δv/Δt (gal/min)	T-TAKE = Q/L (gal/min/ft)	T = 0.13368 T _L	LV=82.89 T _L x 150 P _T	Kequiv (cm/sec)
BW108	1	58.00-81.00	22.00	0.50	3.15	Low	17.500	40.425	44.075	19.080	49.500	8	8.250	0.375	0.050	38.608	4.78 x 10 ⁻⁴
	1					Med.	35.700	82.467	86.117	37.280	157.000	13	12.077	0.549	0.073	27.427	3.57 x 10 ⁻⁴
	1					High	53.000	122.430	126.080	54.580	198.000	11	18.000	0.818	0.109	27.922	3.83 x 10 ⁻⁴
	1					Med.	34.800	80.388	84.038	36.380	102.000	9	11.333	0.515	0.089	26.375	3.43 x 10 ⁻⁴
	1					Low	18.100	37.191	40.841	17.680	94.500	12	7.875	0.358	0.048	37.711	4.90 x 10 ⁻⁴
BW108	1	74.00-94.00	20.00	5.42	3.85	Low	15.730	36.336	45.408	19.656	1.200	15	0.080	0.004	0.001	0.379	4.93 x 10 ⁻⁶
	1					Med.	35.000	80.850	89.920	38.926	23.300	10	2.330	0.117	0.016	5.575	7.25 x 10 ⁻⁵
	1					High	55.200	127.512	136.582	59.126	52.600	15	3.507	0.175	0.023	5.523	7.18 x 10 ⁻⁵
	1					Med.	35.000	80.850	89.920	38.926	22.800	10	2.280	0.114	0.015	5.455	7.09 x 10 ⁻⁵
	1					Low	16.000	36.960	48.030	19.926	0.000	10	0.000	0.000	0.000	0.000	0.00
BW109	1	70.00-90.00	20.00	53.70	3.50	Low	9.000	20.790	77.990	33.762	84.500	10	8.450	0.323	0.043	17.792	2.31 x 10 ⁻⁴
	1					Med.	18.000	41.580	98.780	42.762	88.000	10	8.800	0.440	0.059	19.166	2.49 x 10 ⁻⁴
	1					High	26.000	60.060	117.260	50.762	108.000	10	10.800	0.540	0.072	19.814	2.58 x 10 ⁻⁴
	1					Med.	18.000	41.580	98.780	42.762	93.700	10	9.370	0.469	0.063	20.407	2.65 x 10 ⁻⁴
	1					Low	9.000	20.790	77.990	33.762	72.500	10	7.250	0.363	0.048	19.999	2.60 x 10 ⁻⁴
BW110	1	64.00-84.00	20.00	48.09	4.45	Low	12.000	27.720	80.280	34.745	9.300	8	1.163	0.058	0.008	3.116	4.05 x 10 ⁻⁵
	1					Med.	24.000	55.440	107.980	46.745	56.100	10	5.810	0.281	0.037	11.177	1.45 x 10 ⁻⁴
	1					High	34.000	78.540	131.080	58.745	205.100	10	20.510	1.028	0.137	33.662	4.38 x 10 ⁻⁴
	1					Med.	24.000	55.440	107.980	46.745	31.900	2	15.950	0.798	0.107	31.778	4.13 x 10 ⁻⁴
	2	69.50-84.00	15.00	48.09	7.20	Low	12.000	27.720	83.010	35.935	0.100	8	0.017	0.001	0.00015	0.058	7.49 x 10 ⁻⁷
2	Med.					24.000	55.440	110.730	47.935	0.000	3	0.000	0.000	0.000	0.000	0.00	
2	High					35.000	80.850	136.140	58.935	0.000	6	0.000	0.000	0.000	0.000	0.00	
BW111	1	189.00-209.00	20.00	48.00	3.20	Low	25.000	57.750	106.950	46.299	0.200	8	0.025	0.001	0.00017	0.050	6.54 x 10 ⁻⁷
	1					Med.	50.000	115.500	164.700	71.299	0.500	10	0.050	0.003	0.00033	0.065	8.48 x 10 ⁻⁷
	1					High	75.000	173.250	222.450	96.299	0.300	6	0.050	0.003	0.00033	0.048	6.29 x 10 ⁻⁷
	2					189.00-248.00	59.00	67.00	7.10	Low	28.000	64.680	138.780	60.078	0.100	3	0.033
	2	Med.	56.000	129.360	203.460					88.078	0.100	4	0.025	0.000	0.00008	0.009	1.16 x 10 ⁻⁷
2	High	84.000	194.040	268.140	116.078					0.200	4	0.050	0.001	0.00011	0.014	1.77 x 10 ⁻⁷	
BW112	1	179.00-199.00	20.00	42.00	6.15	Low	24.000	55.440	103.590	44.844	0.200	9	0.022	0.001	0.00015	0.048	6.00 x 10 ⁻⁷
	1					Med.	48.000	110.880	159.030	68.844	0.400	9	0.044	0.002	0.00030	0.060	7.82 x 10 ⁻⁷
	1					High	72.000	166.320	214.470	92.844	0.350	6	0.058	0.003	0.00039	0.059	7.61 x 10 ⁻⁷
	2					179.00-239.00	60.00	42.00	4.00	Low	27.000	62.370	108.370	46.913	0.000	3	0.000
	2	Med.	54.500	125.895	171.895					74.413	0.300	3	0.100	0.002	0.00022	0.042	5.42 x 10 ⁻⁷
2	High	81.000	187.110	233.110	100.913					0.400	4	0.100	0.002	0.00022	0.031	4.00 x 10 ⁻⁷	

(See Page One For Legend)



SIRRINE
ENVIRONMENTAL
CONSULTANTS

WATER PRESSURE TEST

BORING NO. BW-2	TEST NO. 1
SEC JOB NO.: G-8026	
PAGE: 1 OF 3	
DATE START: 7/31/89	
DATE FINISH: 7/31/89	
DRILLER: D. G. Fitzpatrick	
SEC REP.: R. J. Hunt	
TEST INTERVAL (FT) 60.35 TO 85.0	
ROCK TYPE Fractured Schist	
REMARKS Schist is weathered	
BOREHOLE DIAMETER (IN) 4.0	
DRILLING METHOD Open hole coring	

PROJECT: MEDLEY FARMS RI/FS PHASE IA
 CLIENT: MEDLEY FARMS STEERING COMMITTEE
 CONTRACTOR: ENVIRONMENTAL DRILLING & SERVICES

	PACKER SYSTEM	WATER METER	WATER PRESSURE GAGE	WATER PUMP
TYPE	Inflatable	Turbo	Bernoulli	Screw
MFG.	Bimbar 1	Rockwell	U.S. Gauge	Moyno
MODEL NO.	3688-301	W14	--	3L6
I. D. NO.	--	--	--	--

WATER PIPE I. D. 1" TYPE Sch. 40 PVC
 SURGE CHAMBER DESCRIPTION N/A

STATIC WATER LEVEL MEASUREMENTS (ALL MEASUREMENTS ARE IN FEET BELOW GROUND SURFACE)

DATE	ELAPSED TIME (HRS)	WATER LEVEL	BOTTOM OF CASING	BOTTOM OF HOLE	REMARKS / PACKED OFF INTERVAL
7/31/89	--	65.05	64.36	85.0	

CALCULATED HYDROSTATIC HEAD AT MIDPOINT OF TEST ZONE (PSI) = _____
 (DEPTH TO STATIC WATER LEVEL - DEPTH TO MIDPOINT OF TEST) x (0.43 PSI / FT)

TIME	ELAPSED TIME (MIN)	PACKER PRESSURE (PSI)	GAUGE PRESSURE (PSI)	METER READING (GALS)	RATE OF FLOW (GALS / MIN)	DEPTH TO WATER IN CASING	REMARKS
14:45	--	125	--	1049.1	--		Pre-Test measurements
14:47	--	125	5.0	1056.2	--		Gauge stabilized at 5.0 psi
14:48	1.0	125	5.0	1067.2	11.0		
14:49	2.0	125	5.0	1078.2	11.0		
14:50	3.0	125	5.0	1089.1	10.9		
14:51	4.0	125	5.0	1100.1	11.0		
14:52	--	125	10.0	1111.4	--		Gauge stabilized at 10.0 psi
14:53	1.0	125	10.0	1123.2	11.8		
14:54	2.0	125	10.0	1135.1	11.9		
14:55	3.0	125	10.0	1146.8	11.7		
14:56	4.0	125	10.0	1158.7	11.9		
14:58	--	125	15.0	1171.8	--		Gauge stabilized at 15.0 psi
14:59	1.0	125	15.0	1183.5	11.7		
15:00	2.0	125	--	1190.0	--		Ran out of water
17:14	--	125	--	1190.0	--		Prepare to resume test
17:15.45	--	125	15.0	1205.7	--		Gauge stabilized at 15.0 psi



WATER PRESSURE TEST

PROJECT MEDLEY FARMS RI/FS PHASE 1A

PAGE 2 OF 3

SEC JOB NO. G-8026

BORING NO. BW-2

TEST NO. 1

[illegible]

**WATER PRESSURE
TEST ASSEMBLY
SINGLE PACKER TEST**

BORING NO. BW-2

TEST NO. 1

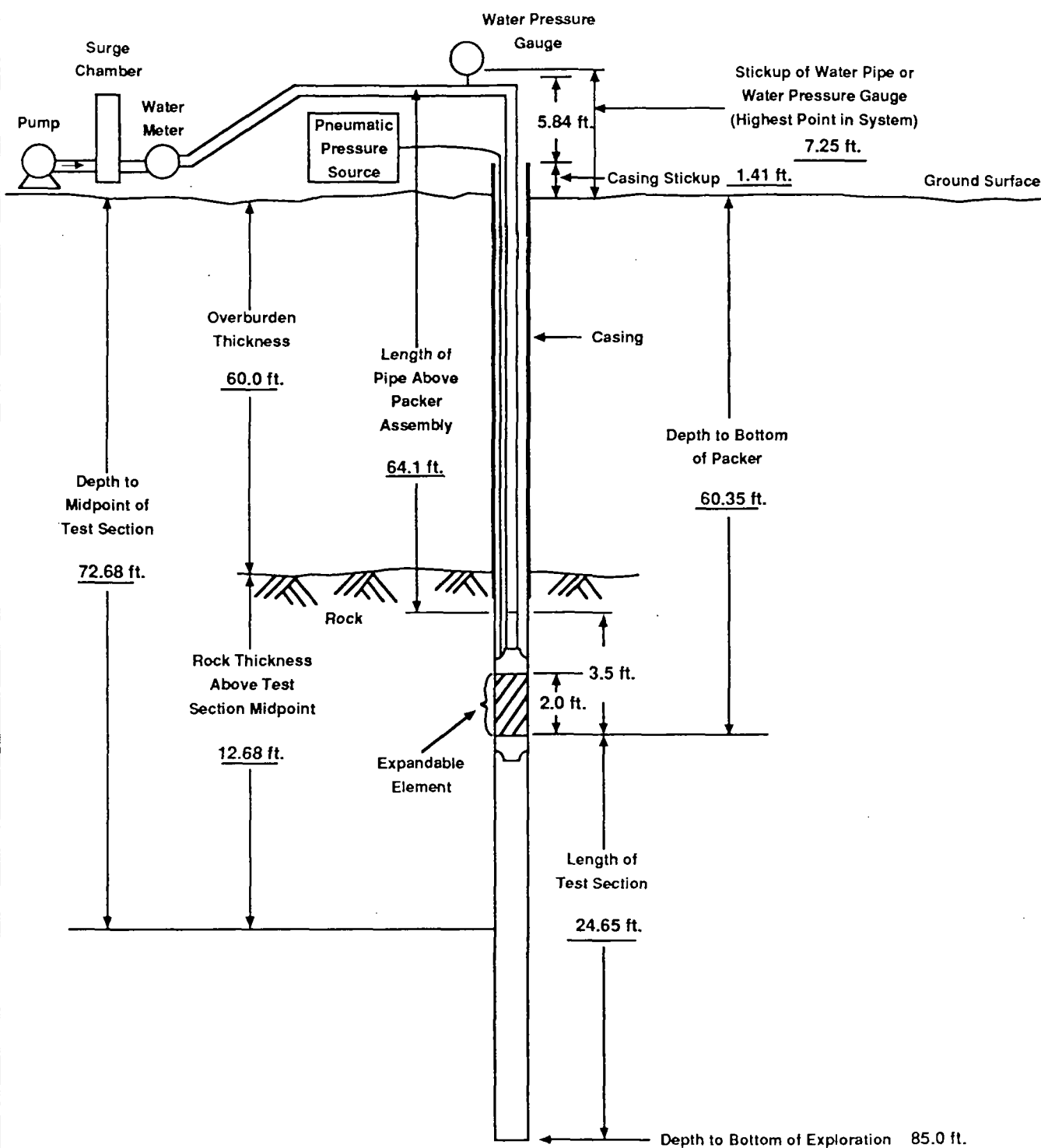
SEC JOB NO. G-8026

PAGE 3 OF 3

SEC REP. R. J. HUNT

PROJECT: MEDLEY FARMS RI/FS PHASE IA

CLIENT: MEDLEY FARMS STEERING COMMITTEE



Note: Water pressure gauge should be a minimum of 6 pipe diameters away from any elbows or pipe constrictions.



WATER PRESSURE TEST

BORING NO. BW-3	TEST NO. 1
SEC JOB NO.: G-8026	
PAGE: 1 OF 3	
DATE START: 7/24/89	
DATE FINISH: 7/24/89	
DRILLER: D. G. Fitzpatrick	
SEC REP.: R. J. Hunt	
TEST INTERVAL (FT) 34.1 TO 55.0	
ROCK TYPE Fractured Gneiss	
REMARKS	
BOREHOLE DIAMETER (IN) 4.0	
DRILLING METHOD Open hole coring	

PROJECT: MEDLEY FARMS RI/FS PHASE IA
 CLIENT: MEDLEY FARMS STEERING COMMITTEE
 CONTRACTOR: ENVIRONMENTAL DRILLING & SERVICES

	PACKER SYSTEM	WATER METER	WATER PRESSURE GAGE	WATER PUMP
TYPE	Inflatable	Turbo	Bernoulli	Screw
MFG.	Bimbar 1	Rockwell	U.S. Gauge	Moyno
MODEL NO.	3688-301	W14	--	3L6
I. D. NO.	--	--	--	--

WATER PIPE I. D. 1" TYPE Sch. 40 PVC
 SURGE CHAMBER DESCRIPTION N/A

STATIC WATER LEVEL MEASUREMENTS (ALL MEASUREMENTS ARE IN FEET BELOW GROUND SURFACE)

DATE	ELAPSED TIME (HRS)	WATER LEVEL	BOTTOM OF CASING	BOTTOM OF HOLE	REMARKS / PACKED OFF INTERVAL
7/21/89	--	5.08	35.0	55.0	
7/24/89		5.15	35.0	55.0	

CALCULATED HYDROSTATIC HEAD AT MIDPOINT OF TEST ZONE (PSI) = 16.96
 (DEPTH TO STATIC WATER LEVEL—DEPTH TO MIDPOINT OF TEST) x (0.43 PSI / FT)

TIME	ELAPSED TIME (MIN)	PACKER PRESSURE (PSI)	GAUGE PRESSURE (PSI)	METER READING (GALS)	RATE OF FLOW (GALS / MIN)	DEPTH TO WATER IN CASING	REMARKS
10:00	--	125	--	359.0	--		Pre-Test measurements
10:00:30	--	125	14.0	360.4	--		Gauge stabilized at 14.0 psi
10:01:30	1.0	125	14.0	364.2	3.8		
10:02:30	2.0	125	14.0 *	368.2	4.0		* Pressure jumped briefly to 18 psi
10:03:30	3.0	125	14.0	372.0	3.8		
10:04:30	4.0	125	14.0	375.8	3.8		
10:05:30	5.0	125	14.0 *	379.7	3.9		* Pressure jumped briefly to 18 psi
10:07	--	125	28.0	390.4	--		Gauge stabilized at 28.0 psi
10:08	1.0	125	28.0 *	397.3	6.9		* Pressure jumped briefly to 29 psi
10:09	2.0	125	29.0	404.1	6.8		
10:10	3.0	125	29.0	411.2	7.1		
10:11	4.0	125	29.0 *	418.4	7.2		* Pressure jumped briefly to 30 psi
10:12	5.0	125	30.0	425.9	7.5		
10:13	--	125	42.0 *	436.1	--		* Gauge stabilized at 42.0 psi but decreased briefly to 40 psi
10:14	1.0	125	42.0 *	446.6	10.5		
10:15	2.0	125	42.0	457.7	11.1		



WATER PRESSURE TEST

PROJECT MEDLEY FARMS RI/FS PHASE 1A

PAGE 2 OF 3

SEC JOB NO. G-8026

BORING NO. BW-3

TEST NO. 1

[illegible]

**WATER PRESSURE
TEST ASSEMBLY
SINGLE PACKER TEST**

BORING NO. BW-3 TEST NO. 1

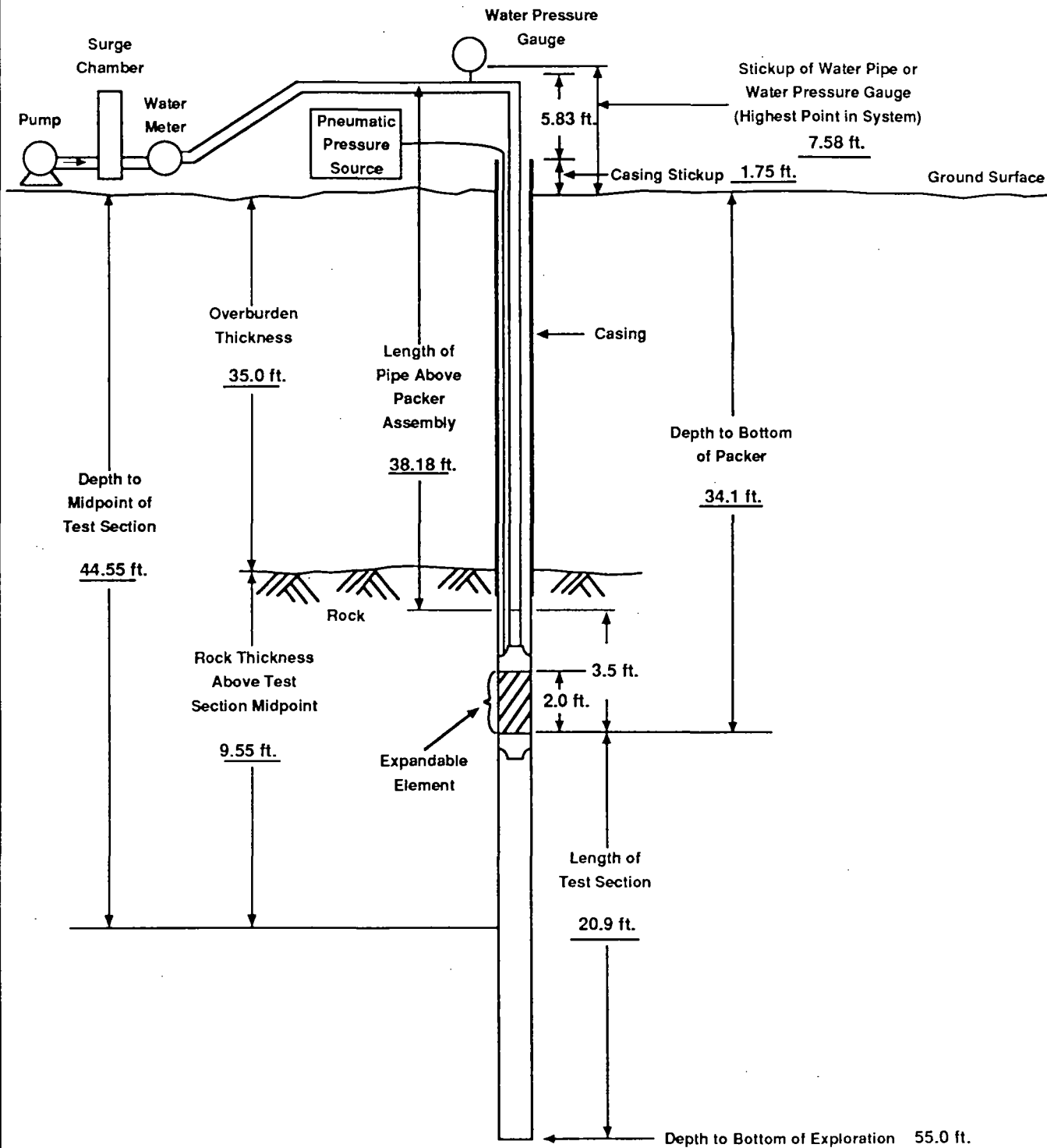
SEC JOB NO. G-8026

PROJECT : MEDLEY FARMS R/FS PHASE IA

PAGE 3 OF 3

CLIENT : MEDLEY FARMS STEERING COMMITTEE

SEC REP. R. J. HUNT



Note: Water pressure gauge should be a minimum of 6 pipe diameters away from any elbows or pipe constrictions.



WATER PRESSURE TEST

BORING NO. BW-4	TEST NO. 1
SEC JOB NO.: G-8026	
PAGE: 1 OF 3	
DATE START: 7/20/89	
DATE FINISH: 7/20/89	
DRILLER: D. G. Fitzpatrick	
SEC REP.: R. L. Burdine	
TEST INTERVAL (FT) 18.0 TO 31.0	
ROCK TYPE Highly fracture Gabbro	
REMARKS	
BOREHOLE DIAMETER (IN) 3.5	
DRILLING METHOD H Coring	

PROJECT: MEDLEY FARMS RI/FS PHASE IA				
CLIENT: MEDLEY FARMS STEERING COMMITTEE				
CONTRACTOR: ENVIRONMENTAL DRILLING & SERVICES				
	PACKER SYSTEM	WATER METER	WATER PRESSURE GAGE	WATER PUMP
TYPE	Inflatable	Turbo	Bermoull	Screw
MFG.	Aardvark	Rockwell	U.S. Gauge	Moyno
MODEL NO.	3687249	W14	--	3L6
I. D. NO.	--	--	--	--
WATER PIPE I. D. 1" TYPE Sch. 40 PVC				
SURGE CHAMBER DESCRIPTION Not needed with a Moyno pump. Moyno can maintain constant pressure.				

STATIC WATER LEVEL MEASUREMENTS (ALL MEASUREMENTS ARE IN FEET BELOW GROUND SURFACE)

DATE	ELAPSED TIME (HRS)	WATER LEVEL	BOTTOM OF CASING	BOTTOM OF HOLE	REMARKS / PACKED OFF INTERVAL
7/14/89	W.D.	4.2	10.0	10.0	
7/20/89	24	3.9	18.0	31.0	

CALCULATED HYDROSTATIC HEAD AT MIDPOINT OF TEST ZONE (PSI) = 8.82
 (DEPTH TO STATIC WATER LEVEL—DEPTH TO MIDPOINT OF TEST) x (0.43 PSI / FT)

TIME	ELAPSED TIME (MIN)	PACKER PRESSURE (PSI)	GAUGE PRESSURE (PSI)	METER READING (GALS)	RATE OF FLOW (GALS / MIN)	DEPTH TO WATER IN CASING	REMARKS
09:47	1.0	200	9	39370.1	.3	0.1	
09:48	2.0	200	9	39370.4	0	0.1	
09:49	3.0	200	9	39370.4	0	0.1	
09:50	4.0	200	9	39370.4	0	0.1	
09:51	5.0	200	9	39370.4	0	0.1	
09:53	1.0	200	16	39370.4	0	0.1	
09:54	2.0	200	16	39370.4	0	0.1	
09:55	3.0	200	16	39370.4	0	0.1	
09:56	4.0	200	16.5	39370.4	0	0.1	
09:57	5.0	200	17	39370.4	0	0.1	
							Note: MGP calculated at 40 PSI. Due to no flow situation decided to go to 30 psi on final stage.
10:00	1.0	200	30	39370.4	0	0.1	
10:01	2.0	200	30	39380.3	9.9	0.1	* Had problems getting stabilized
10:02	3.0	200	30	39390.4	10.1	0.1	* True start of stage
10:03	4.0	200	30	39400.8	10.4	0.1	

WATER PRESSURE TEST

PAGE 2 OF 3

PROJECT MEDLEY FARMS RI/FS PHASE 1A

BORING NO. BW-4SEC JOB NO. G-8026

TEST NO. _____ 1

[illegible]

**WATER PRESSURE
TEST ASSEMBLY
SINGLE PACKER TEST**

BORING NO. BW-4

TEST NO. 1

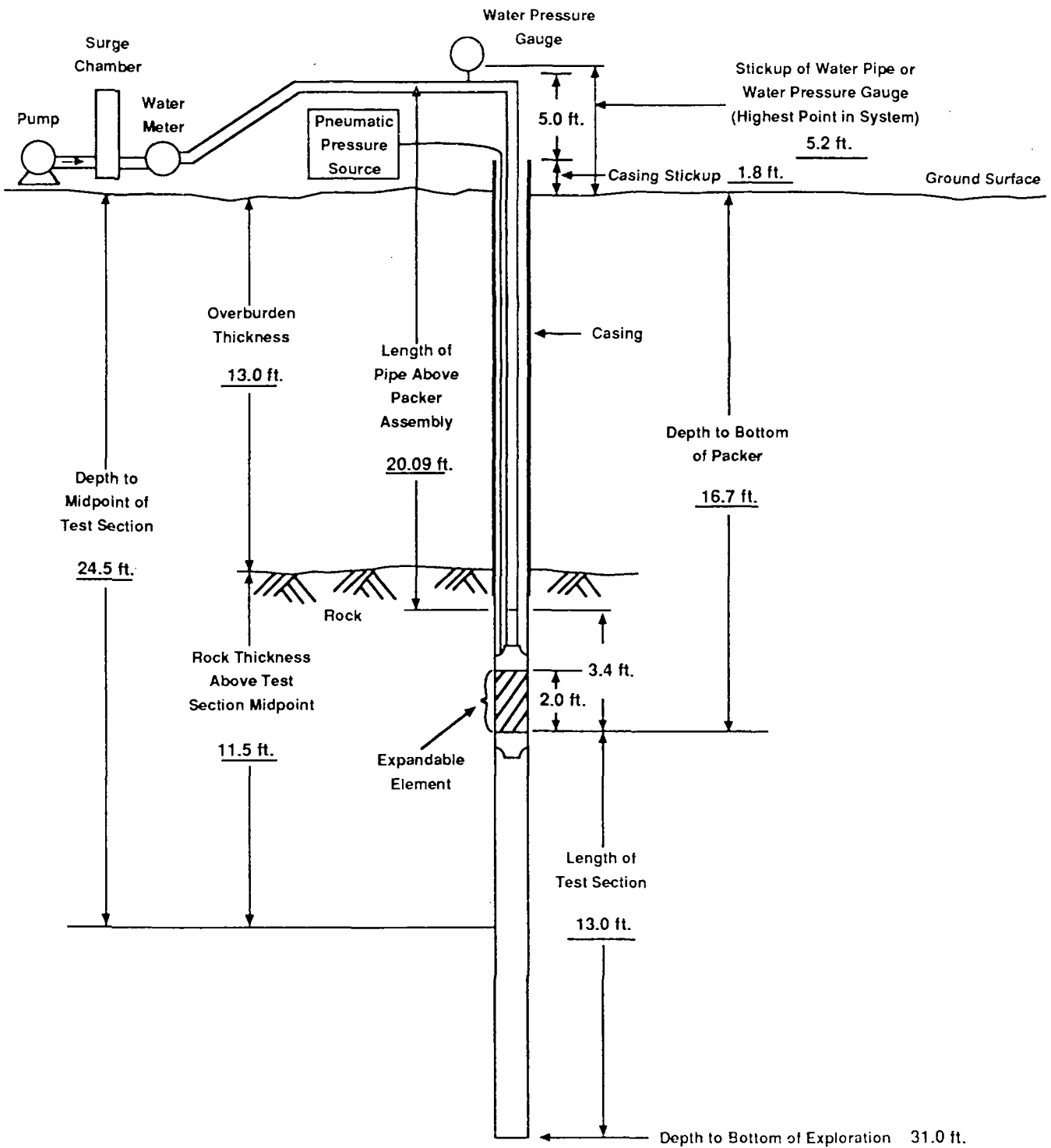
SEC JOB NO. G-8026

PROJECT : MEDLEY FARMS RI/FS PHASE IA

PAGE 3 OF 3

CLIENT : MEDLEY FARMS STEERING COMMITTEE

SEC REP. R. L. BURDINE



Note: Water pressure gauge should be a minimum of 6 pipe diameters away from any elbows or pipe constrictions.



WATER PRESSURE TEST

BORING NO. BW106	TEST NO. 1
SEC JOB NO.: G-8026	
PAGE: 1 OF 4	
DATE START: 9/26/90	
DATE FINISH: 9/26/90	
DRILLER: K. Warren	
SEC REP.: J. Gillespie/R. Burdine	
TEST INTERVAL (FT) 58.7 TO 80.6	
ROCK TYPE Quartz-Feldspathic Schist	
REMARKS	
Influence on Stream	
Channel	
BOREHOLE DIAMETER (IN)	
DRILLING METHOD Mud Rotary	
Conventional Coring	

PROJECT: MEDLEY FARMS RI/FS PHASE II
 CLIENT: MEDLEY FARMS STEERING COMMITTEE
 CONTRACTOR: ATLANTA TESTING AND ENGINEERING

	PACKER SYSTEM	WATER METER	WATER PRESSURE GAGE	WATER PUMP
TYPE	HQ	Flow	Standard	Screw
MFG.	Tigre Tierra	Neptune	Tererice	Moyno
MODEL NO.	34B89-436	5/8T-10	--	3L6
I. D. NO.	--	32959930	100 psi	--
WATER PIPE I. D. 1.25 TYPE Galvanized				
SURGE CHAMBER DESCRIPTION 8" cylinder with inlet/outlet				

STATIC WATER LEVEL MEASUREMENTS (ALL MEASUREMENTS ARE IN FEET BELOW GROUND SURFACE)

DATE	ELAPSED TIME (HRS)	WATER LEVEL	BOTTOM OF CASING	BOTTOM OF HOLE	REMARKS / PACKED OFF INTERVAL
9/26/90	1.75	+3.0	58.67	80.6	

CALCULATED HYDROSTATIC HEAD AT MIDPOINT OF TEST ZONE (PSI) = 32 psi
 (DEPTH TO STATIC WATER LEVEL—DEPTH TO MIDPOINT OF TEST) x (0.43 PSI / FT)

TIME	ELAPSED TIME (MIN)	PACKER PRESSURE (PSI)	GAUGE PRESSURE (PSI)	METER READING (GALS)	RATE OF FLOW (GALS / MIN)	DEPTH TO WATER IN CASING	REMARKS
	--	150	--	1775.0	--	1 ft.	
14:30	1.0	150	17	1792.0	--	1 ft.	
14:32	2.0	110	17	1803.0	11.0	1 ft.	
14:33	3.0	100	17	1811.0	8.0	1 ft.	Loosing pressure in packer
				1820.0	9.0	1 ft.	Start test over - Reset packer
	Achieving 17 psi			1828.0	--	1 ft.	
14:40	0.0	150	17	1859.5	--	1 ft.	
14:41	1.0	150	17	1858.8	--	1 ft.	
14:42	2.0	150	17	1868.5	9.7	1 ft.	
14:43	3.0	150	18	1874.5	6.0	1 ft.	
14:44	4.0	150	17.5	1883.0	8.5	1 ft.	
14:45	5.0	150	17.5	1891.5	8.5	1 ft.	
14:46	6.0	150	18.0	1909.0	17.5	1 ft.	
14:48	1.0	150	35.0	1921.0	12.0	1 ft.	
14:49	2.0	150	35.0	1934.0	13.0	1 ft.	
14:50	3.0	150	36.0	1947.0	13.0	1 ft.	

WATER PRESSURE TEST

 PROJECT MEDLEY FARMS RI/FS PHASE II

 PAGE 2 OF 4

 SEC JOB NO. G-8026

 BORING NO. BW106

 TEST NO. 1

TIME	ELAPSED TIME (MIN)	PACKER PRESSURE (PSI)	GAUGE PRESSURE (PSI)	METER READING (GALS)	RATE OF FLOW (GALS / MIN)	DEPTH TO WATER IN CASING	REMARKS
14:51	4.0	150	35.0	1960.0	13.0	1 ft.	
14:52	5.0	150	35.0	1972.0	12.0	1 ft.	
14:53	6.0	150	34.5	1984.0	12.0	1 ft.	
14:54	7.0	150	37.0	1997.0	13.0	1 ft.	
14:55	8.0	150	37.5	2010.5	13.0	1 ft.	
14:56	9.0	150	36.0	2024.0	14.0	1 ft.	
14:57	10.0	150	36.0	2037.5	13.5	1 ft.	
14:58	11.0	150	36.0	2050.8	13.3	1 ft.	
14:59	12.0	150	36.0	2064.0	13.2	1 ft.	
14:60	13.0	150	36.0	2078.0	14.0	1 ft.	
15:01	1.0	150	52.0	2094.0	16.0	1 ft.	
15:02	2.0	150	52.0	2115.0	21.0	1 ft.	
15:03	3.0	150	53.0	2134.5	19.5	1 ft.	
15:04	4.0	150	54.0	2154.0	19.5	1 ft.	Out of H2O
15:21	5.0	150	54.0	2156.0	--	1 ft.	Starting Test Again
15:22	6.0	150	52.0	2181.0	25.0	1 ft.	
15:23	7.0	150	52.0	2206.0	25.0	1 ft.	
15:24	8.0	150	54.0	2228.0	22.0	1 ft.	
15:25	9.0	150	54.0	2250.0	22.0	1 ft.	
15:26	10.0	150	53.0	2271.0	21.0	1 ft.	
15:27	11.0	150	54.0	2292.0	21.0	1 ft.	
15:28	1.0	150	35.0	2303.0	11.0	1 ft.	
15:29	2.0	150	35.0	2314.0	13.0	1 ft.	
15:30	3.0	150	35.0	2337.0	16.0	1 ft.	
15:31	4.0	150	35.0	2346.0	9.0	1 ft.	
15:32	5.0	150	35.0	2362.0	16.0	1 ft.	
15:33	6.0	150	36.0	2377.0	15.0	1 ft.	
15:34	7.0	150	34.0	2391.5	14.5	1 ft.	
15:35	8.0	150	34.0	2400.0	8.5	1 ft.	
15:36	9.0	150	34.0	2405.0	5.0	1 ft.	
15:37	1.0	150	17.0	2412.5	7.5	1 ft.	



WATER PRESSURE TEST

PROJECT	MEDLEY FARMS RI/FS PHASE II
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PAGE 3 OF 4

SEC JOB NO. G-8026

BORING NO. BW106

TEST NO. 1

[illegible]



WATER PRESSURE TEST

BORING NO. BW108	TEST NO. 1
SEC JOB NO.: G-8026	
PAGE: 1	OF 4
DATE START: 9/18/90	
DATE FINISH: 9/18/90	
DRILLER: K. Warren	
SEC REP.: J. Wylie	
TEST INTERVAL (FT) 73.8 TO 93.9	
ROCK TYPE Quartz-Feldspathic Schist	
REMARKS	
BOREHOLE DIAMETER (IN)	
DRILLING METHOD 4.0	
HQ Coring	

PROJECT:	MEDLEY FARMS RI/FS PHASE II			
CLIENT:	MEDLEY FARMS STEERING COMMITTEE			
CONTRACTOR:	ATLANTA TESTING AND ENGINEERING			
	PACKER SYSTEM	WATER METER	WATER PRESSURE GAGE	WATER PUMP
TYPE	HQ	Flow	Standard	Screw
MFG.	Tigre Tierra	Neptune	Trerice	Moyno
MODEL NO.	34B89-436	5/8T-10	--	3L6
I. D. NO.	--	32959930	100 psi	--
WATER PIPE I. D. 1.25 TYPE Galvanized				
SURGE CHAMBER DESCRIPTION 3.75 ft. long, 6 in. diameter galvanized.				

STATIC WATER LEVEL MEASUREMENTS (ALL MEASUREMENTS ARE IN FEET BELOW GROUND SURFACE)

DATE	ELAPSED TIME (HRS)	WATER LEVEL	BOTTOM OF CASING	BOTTOM OF HOLE	REMARKS / PACKED OFF INTERVAL

CALCULATED HYDROSTATIC HEAD AT MIDPOINT OF TEST ZONE (PSI) = 54.5 psi
(DEPTH TO STATIC WATER LEVEL—DEPTH TO MIDPOINT OF TEST) x (0.43 PSI / FT)

TIME	ELAPSED TIME (MIN)	PACKER PRESSURE (PSI)	GAUGE PRESSURE (PSI)	METER READING (GALS)	RATE OF FLOW (GALS / MIN)	DEPTH TO WATER IN CASING	REMARKS
14:08	--	117	20.0	123.2	--	Visual	* time/time
14:09	1.0	117	15.0	123.2	0	Observations	Peristage/complete test
14:10	2.0	117	15.0	123.2	0	Only	
14:11	3.0	117	14.0	123.2	0		
14:12	4.0	117	16.0	123.6	0.4		
14:13	5.0	117	16.0	124.2	0.6		
14:14	6.0	117	16.0	124.2	0		
14:15	7.0	125	16.0	124.2	0		
14:16	8.0	125	16.0	124.2	0		
14:17	9.0	125	16.0	124.2	0.05		
14:18	10.0	125	16.0	124.3	0.05		
14:19	11.0	125	16.0	124.3	0		
14:20	12.0	125	16.0	124.3	0		
14:21	13.0	125	16.0	124.3	0		
14:22	14.0	125	16.0	124.3	0.05		
14:23	15.0	125	16.0	124.4	0.05		

WATER PRESSURE TEST

 PROJECT MEDLEY FARMS RI/FS PHASE II

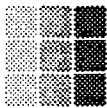
 PAGE 2 OF 4

 SEC JOB NO. G-8026

 BORING NO. BW108

 TEST NO. 1

TIME	ELAPSED TIME (MIN)	PACKER PRESSURE (PSI)	GAUGE PRESSURE (PSI)	METER READING (GALS)	RATE OF FLOW (GALS / MIN)	DEPTH TO WATER IN CASING	REMARKS
14:24	16.0	125	16.0-35.0	--	--	1 ft.	* One min. used to from 16
14:25	1.0	125	35.0	127.2	1.4	1 ft.	to 35 psi.
14:26	2.0	125	35.0	129.9	2.7	1 ft.	* No miment.
14:27	3.0	125	35.0	132.3	2.4	1 ft.	
14:28	4.0	125	35.0	135.0	2.7	1 ft.	Stage 1 take = 4.0 gallons
14:29	5.0	125	35.0	137.6	2.6	1 ft.	
14:30	6.0	125	35.0	140.2	2.6	1 ft.	Very slight decrease in water height
14:31	7.0	125	35.0	142.6	2.4	1 ft.	In casing above packer.
14:32	8.0	125	35.0	145.3	2.7	1 ft.	Stage 2 Take = 26.8 gal.
14:33	9.0	125	35.0	147.9	2.6	1 ft.	
14:34	10.0	125	35.0	150.5	2.4	1 ft.	
14:35	1.0	125	55.0	154.0	3.5	1 ft.	
14:36	2.0	125	55.0	158.0	4.0	1 ft.	
14:37	3.0	125	56.0	162.0	4.0	1 ft.	
14:38	4.0	125	55.0	165.5	3.5	1 ft.	
14:39	5.0	125	56.0	169.3	3.8	1 ft.	
14:40	6.0	125	55.0	173.1	3.8	1 ft.	Dec. has stablized
14:41	7.0	125	55.0	177.0	3.9	1 ft.	
14:42	8.0	125	54.0	180.7	3.7	1 ft.	
14:43	9.0	125	53.0	184.4	3.7	1 ft.	
14:44	10.0	125	54.0	188.0	3.6	1 ft.	
14:45	11.0	125	55.0	191.8	3.8	1 ft.	
14:46	12.0	125	55.0	195.5	3.7	1 ft.	
14:47	13.0	125	55.0	199.3	3.8	1 ft.	
14:48	14.0	125	55.0	202.8	3.5	1 ft.	Stage 3 take = 55.1 gal.
14:49	15.0	125	55.0	206.6	3.8	1 ft.	
14:50	1.0	125	35.0	209.1	2.5	1 ft.	
14:51	2.0	125	35.0	211.8	2.7	1 ft.	
14:52	3.0	125	35.0	214.1	2.3	1 ft.	
14:53	4.0	125	35.0	216.7	2.6	1 ft.	
14:54	5.0	125	35.0	219.2	2.5	1 ft.	



SIRRINE
ENVIRONMENTAL
CONSULTANTS

WATER PRESSURE TEST

PROJECT MEDLEY FARMS RI/FS PHASE II

PAGE 3 OF 4

SEC JOB NO. G-8026

BORING NO. BW108

TEST NO. 1

TIME	ELAPSED TIME (MIN)	PACKER PRESSURE (PSI)	GAUGE PRESSURE (PSI)	METER READING (GALS)	RATE OF FLOW (GALS / MIN)	DEPTH TO WATER IN CASING	REMARKS
14:55	6.0	150	35.0	221.8	2.6	1 ft.	
14:56	7.0	150	35.0	224.2	2.4	1 ft.	
14:57	8.0	150	35.0	226.7	2.5	1 ft.	
14:58	9.0	150	35.0	229.2	2.5	1 ft.	
14:59	10.0	150	35.0	231.9	2.7	1 ft.	Stage 4 Take = 22.8 gal.
15:00	1.0	150	16.0	232.1	0.2	1 ft.	
15:01	2.0	150	16.0	232.1	0.0	1 ft.	
15:02	3.0	150	16.0	232.1	0.0	1 ft.	
15:03	4.0	150	16.0	232.1	0.0	1 ft.	
15:04	5.0	150	16.0	232.1	0.0	1 ft.	
15:05	6.0	150	16.0	232.1	0.0	1 ft.	
15:06	7.0	150	16.0	232.1	0.0	1 ft.	
15:07	8.0	150	16.0	232.1	0.0	1 ft.	
15:08	9.0	150	16.0	232.1	0.0	1 ft.	
15:09	10.0	150	16.0	232.1	0.0	1 ft.	End of Test Stage 5 Take = 0.2 gal.
							Total Test Time = 61 min.
							Stage 1 (16 psi): 16 min.
							Stage 2 (35 psi): 10 min.
							Stage 3 (55 psi): 15 min.
							Stage 4 (35 psi): 10 min.
							Stage 5 (16 psi): 10 min.
							Total Take: 108.9 gallons
							Average Take: 1.78 gpm

**WATER PRESSURE
TEST ASSEMBLY
SINGLE PACKER TEST**

BORING NO. BW108 TEST NO. 1

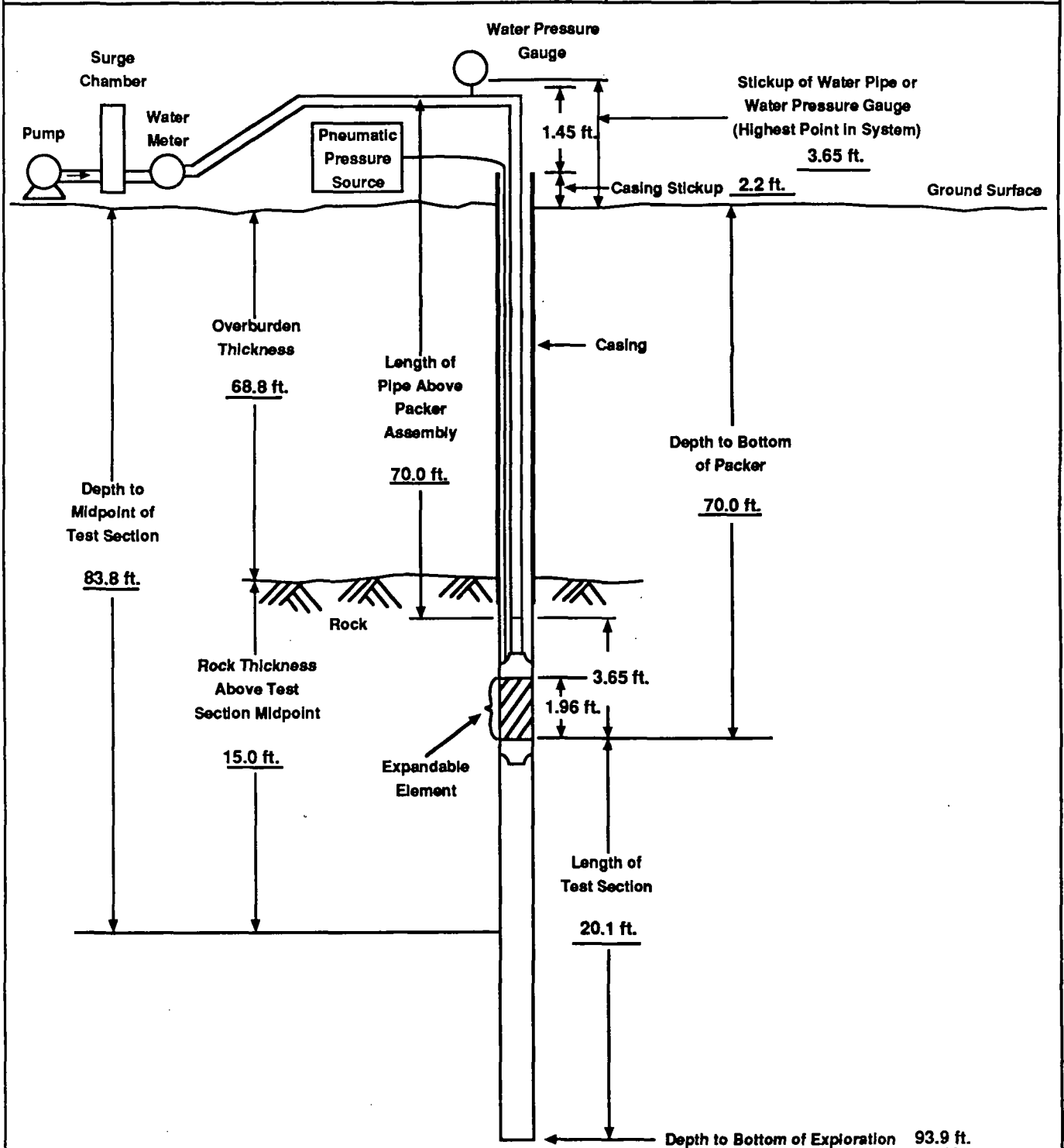
SEC JOB NO. G-8026

PROJECT : MEDLEY FARMS R/FS PHASE IA

PAGE 4 OF 4

CLIENT : MEDLEY FARMS STEERING COMMITTEE

SEC REP. J. WYLIE



Note: Water pressure gauge should be a minimum of 6 pipe diameters away from any elbows or pipe constrictions.



WATER PRESSURE TEST

BORING NO. BW109 TEST NO. 1

SEC JOB NO.: G-8026

PAGE: 1 OF 4

DATE START: 10/2/90

DATE FINISH: 10/2/90

DRILLER: P. Berman

SEC REP.: J. Gillespie

PROJECT: MEDLEY FARMS RI/FS PHASE II

CLIENT: MEDLEY FARMS STEERING COMMITTEE

CONTRACTOR: ATLANTA TESTING AND ENGINEERING

	PACKER SYSTEM	WATER METER	WATER PRESSURE GAGE	WATER PUMP
TYPE	HQ	Flow	Standard	Screw
MFG.	Tigre Tierra	Neptune	Trerice	Moyno
MODEL NO.	34B89-436	5/8T-10	--	3L6
I. D. NO.	--	32959930	100 psi	--

TEST INTERVAL (FT) 69.5 TO 90.0

ROCK TYPE Schist

REMARKS Highly Fractured

WATER PIPE I. D. 1.25 TYPE Galvanized

SURGE CHAMBER DESCRIPTION .5 ft. diameter cylinder with inlet/outlet

BOREHOLE DIAMETER (IN) 4.0

DRILLING METHOD Conventional Coring

STATIC WATER LEVEL MEASUREMENTS (ALL MEASUREMENTS ARE IN FEET BELOW GROUND SURFACE)

DATE	ELAPSED TIME (HRS)	WATER LEVEL	BOTTOM OF CASING	BOTTOM OF HOLE	REMARKS / PACKED OFF INTERVAL
10-2-90	--	~ 50	69.5	90	69.5 to 90.0

CALCULATED HYDROSTATIC HEAD AT MIDPOINT OF TEST ZONE (PSI) = $29.75 \times .43 = 12.79$ psi
(DEPTH TO STATIC WATER LEVEL—DEPTH TO MIDPOINT OF TEST) x (0.43 PSI / FT)

TIME	ELAPSED TIME (MIN)	PACKER PRESSURE (PSI)	GAUGE PRESSURE (PSI)	METER READING (GALS)	RATE OF FLOW (GALS / MIN)	DEPTH TO WATER IN CASING	REMARKS
				6120.0			Beginnning Reading
			9.0	--			Flush System
16:17	0.0	150	9.0	6174.0	0.0	0.1	Begin Test
16:18	1.0	150	9.0	6178.0	4.0		
16:19	2.0	150	9.0	6183.0	5.0		
16:20	3.0	150	9.0	6190.0	7.0		
16:21	4.0	150	9.0	9197.5	7.5		
16:22	5.0	150	9.0	6205.0	7.5		
16:23	6.0	150	9.0	6212.0	7.0		
16:24	7.0	150	9.0	6219.0	7.0		
16:25	8.0	150	9.0	6225.0	6.0		
16:26	9.0	150	9.0	6232.0	7.0		
16:27	10.0	150	9.0	6238.5	6.5		
16:28	0.0	150	18.0	6247.0	8.5		
16:29	1.0	150	18.0	6257.0	10.0		
16:30	2.0	150	18.0	6265.0	8.0		

WATER PRESSURE TEST

 PROJECT MEDLEY FARMS RI/FS PHASE II

 PAGE 2 OF 4

 SEC JOB NO. G-8026

 BORING NO. BW109

 TEST NO. 1

TIME	ELAPSED TIME (MIN)	PACKER PRESSURE (PSI)	GAUGE PRESSURE (PSI)	METER READING (GALS)	RATE OF FLOW (GALS / MIN)	DEPTH TO WATER IN CASING	REMARKS
16:31	3.0	150	18.0	6275.0	10.0	0.1	
16:32	4.0	150	18.0	6283.0	8.0	0.1	
16:33	5.0	150	18.0	6291.0	8.0	0.1	
16:34	6.0	150	18.0	6300.0	9.0	0.1	
16:35	7.0	150	18.0	6309.0	9.0	0.1	
16:36	8.0	150	18.0	6318.0	9.0	0.1	
16:37	9.0	150	18.0	6326.3	8.3	0.1	
16:38	10.0	150	18.0	6335.0	8.7	0.1	
16:40	0.0	150	26.0	6354.0	19.0	0.1	
16:41	1.0	150	26.0	6366.0	12.0	0.1	
16:42	2.0	150	26.0	6376.5	10.5	0.1	
16:43	3.0	150	26.0	6389.0	12.5	0.1	
16:44	4.0	150	26.0	6398.0	9.0	0.1	
16:45	5.0	150	26.0	6409.0	11.0	0.1	
16:46	6.0	150	26.0	6419.0	10.0	0.1	
16:47	7.0	150	26.0	6430.0	11.0	0.1	
16:48	8.0	150	26.0	6440.5	10.5	0.1	
16:49	9.0	150	26.0	6451.0	10.5	0.1	
16:50	10.0	150	26.0	6462.0	11.0	0.1	
16:51	0.0	150	18.0	6471.0	9.0	0.1	
16:52	1.0	150	18.0	6480.5	9.5	0.1	
16:53	2.0	150	18.0	6490.0	9.5	0.1	
16:54	3.0	150	18.0	6499.0	9.0	0.1	
16:55	4.0	150	18.0	6508.5	9.5	0.1	
16:56	5.0	150	18.0	6518.0	9.5	0.1	
16:57	6.0	150	18.0	6527.0	9.0	0.1	
16:58	7.0	150	18.0	6536.5	9.5	0.1	
16:59	8.0	150	18.0	6546.0	9.5	0.1	
17:00	9.0	150	18.0	6555.0	9.0	0.1	
17:01	10.0	150	18.0	6564.7	9.7	0.1	
17:02	0.0	150	9.0	6572.0	7.3	0.1	



PROJECT MEDLEY FARMS RI/FS PHASE II

SEC JOB NO. G-8026

BORING NO. BW109

TEST NO. 1

[illegible]

**WATER PRESSURE
TEST ASSEMBLY
SINGLE PACKER TEST**

BORING NO. BW109 TEST NO. 1

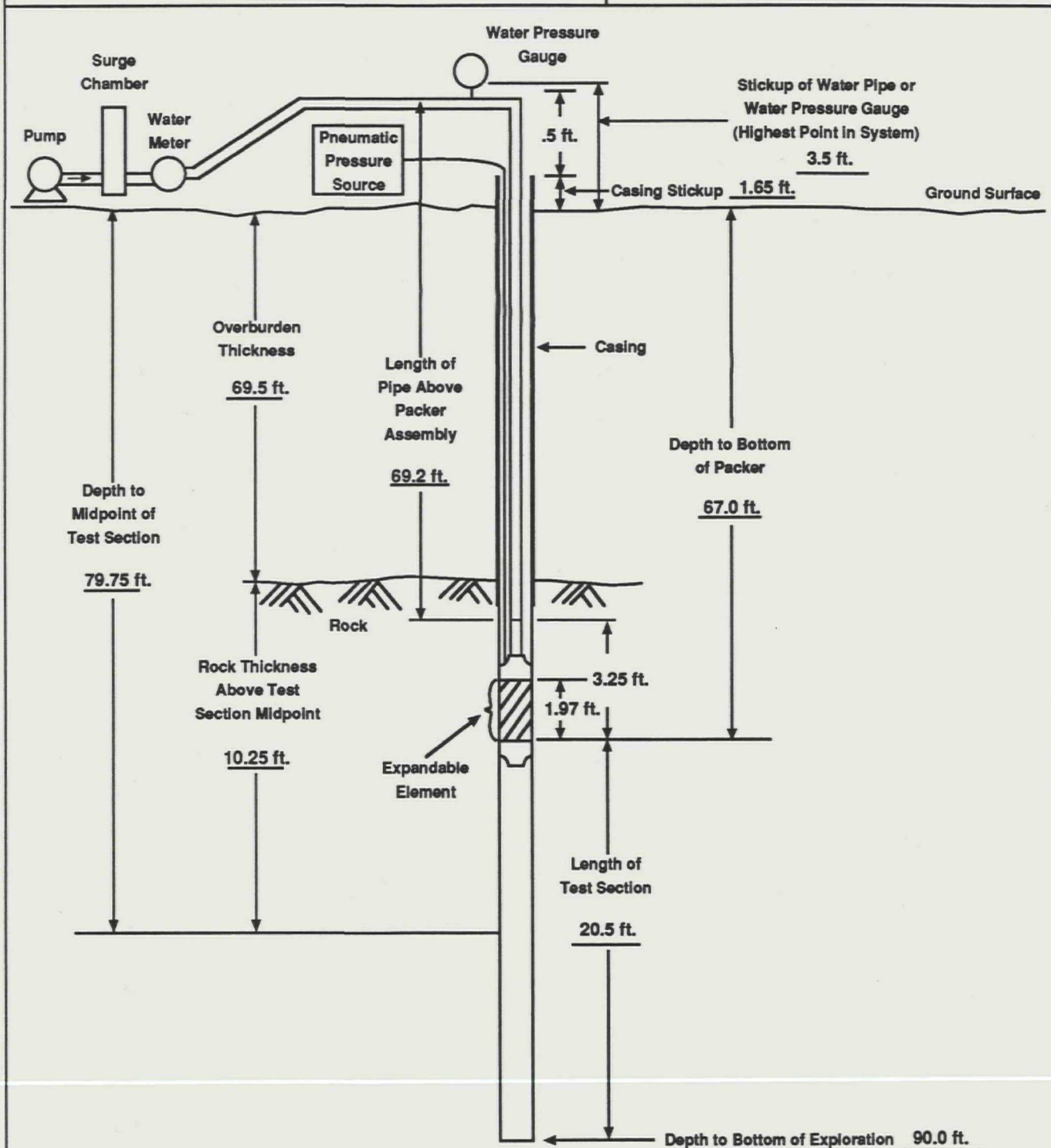
SEC JOB NO. G-8026

PROJECT : MEDLEY FARMS RI/FS PHASE IA

PAGE 4 OF 4

CLIENT : MEDLEY FARMS STEERING COMMITTEE

SEC REP. J. GILLESPIE



Note: Water pressure gauge should be a minimum of 6 pipe diameters away from any elbows or pipe constrictions.



WATER PRESSURE TEST

BORING NO. BW110	TEST NO. 1
SEC JOB NO.: G-8026	
PAGE: 1 OF 3	
DATE START: 9/28/90	
DATE FINISH: 9/28/90	
DRILLER: K. Warren	
SEC REP.: J. Gillespie	
TEST INTERVAL (FT) 64.1 TO 84.1	
ROCK TYPE Gneiss	
REMARKS Highly Fractured	
BOREHOLE DIAMETER (IN) 4.0	
DRILLING METHOD Conventional HQ Coring	

PROJECT: MEDLEY FARMS RI/FS PHASE II				
CLIENT: MEDLEY FARMS STEERING COMMITTEE				
CONTRACTOR: ATLANTA TESTING AND ENGINEERING				
	PACKER SYSTEM	WATER METER	WATER PRESSURE GAGE	WATER PUMP
TYPE	HQ	Flow	Standard	Screw
MFG.	Tigre Tierra	Neptune	Trerice	Moyno
MODEL NO.	34B89-436	5/8T-10	--	3L6
I. D. NO.	--	32959930	100 psi	--
WATER PIPE I. D. 1.25 TYPE Galvanized Threaded & Coupled				
SURGE CHAMBER DESCRIPTION Cylinder				

STATIC WATER LEVEL MEASUREMENTS (ALL MEASUREMENTS ARE IN FEET BELOW GROUND SURFACE)

DATE	ELAPSED TIME (HRS)	WATER LEVEL	BOTTOM OF CASING	BOTTOM OF HOLE	REMARKS / PACKED OFF INTERVAL
9-28-90	12	44.1	64.1	84.5	62 ft. to 84.5

CALCULATED HYDROSTATIC HEAD AT MIDPOINT OF TEST ZONE (PSI) = 13.07 psi
 (DEPTH TO STATIC WATER LEVEL—DEPTH TO MIDPOINT OF TEST) x (0.43 PSI / FT)

TIME	ELAPSED TIME (MIN)	PACKER PRESSURE (PSI)	GAUGE PRESSURE (PSI)	METER READING (GALS)	RATE OF FLOW (GALS / MIN)	DEPTH TO WATER IN CASING	REMARKS
09:53				5491.0	15.5	0.2	Flushing System
09:55	0.0	150	12.0	5522.0	1.0		Inflate Packer and Begin Test
09:56	1.0	150	12.0	5523.0	1.0		
09:57	2.0	150	12.0	5524.8	1.8		
09:58	3.0	150	12.0	5526.1	1.3		
09:59	4.0	150	12.0	5527.1	1.0		
10:00	5.0	225	12.0	5528.2	1.1		225.0 psi Packer water flowing
10:01	6.0	200	12.0	5529.3	1.1		over casing slightly.
10:02	7.0	150	12.0	5530.5	1.2		
10:03	8.0	180	12.0	5531.3	0.8		
10:04	0.0	160	12.0	5535.2	3.9		
10:05	1.0	150	24.0	5541.7	6.5		
10:06	2.0	150	24.0	5546.1	4.4		
10:07	3.0	150	24.0	5550.7	4.6		
10:08	4.0	150	24.0	5556.0	5.3		

**WATER PRESSURE
TEST ASSEMBLY
SINGLE PACKER TEST**

BORING NO. BW110 TEST NO. 1

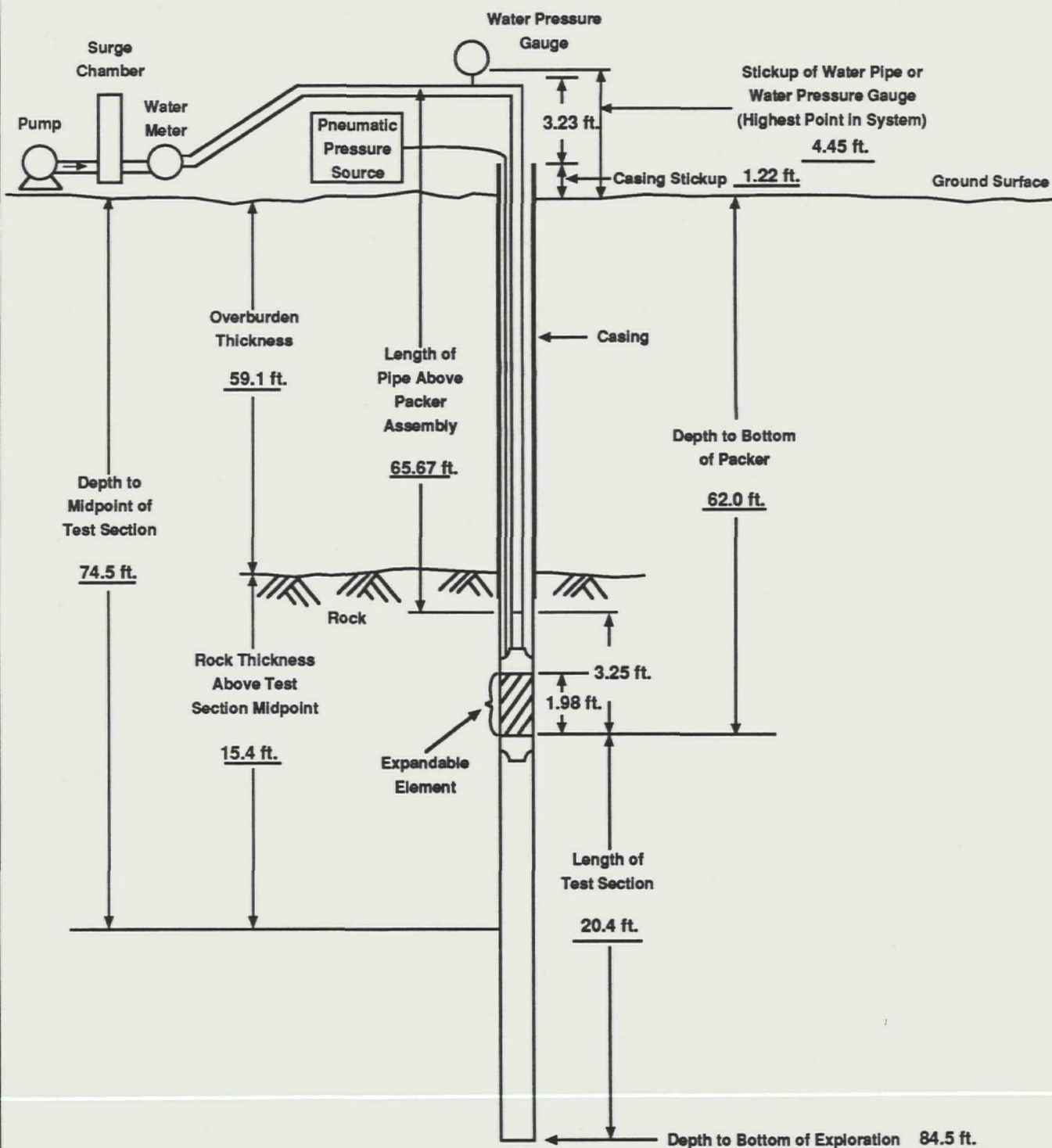
SEC JOB NO. G-8026

PROJECT : MEDLEY FARMS RI/FS PHASE IA

PAGE 3 OF 3

CLIENT : MEDLEY FARMS STEERING COMMITTEE

SEC REP. J. GILLESPIE



Note: Water pressure gauge should be a minimum of 6 pipe diameters away from any elbows or pipe constrictions.



WATER PRESSURE TEST

BORING NO. BW110	TEST NO. 2
SEC JOB NO.: G-8026	
PAGE: 1 OF 3	
DATE START: 9/28/90	
DATE FINISH: 9/28/90	
DRILLER: K. Warren	
SEC REP.: J. Gillespie	
TEST INTERVAL (FT) 69.5 TO 84.5	
ROCK TYPE Gneiss	
REMARKS Tight with few breaks	
BOREHOLE DIAMETER (IN) 4.0	
DRILLING METHOD Conventional HQ Coring	

PROJECT: MEDLEY FARMS RI/FS PHASE II				
CLIENT: MEDLEY FARMS STEERING COMMITTEE				
CONTRACTOR: ATLANTA TESTING AND ENGINEERING				
	PACKER SYSTEM	WATER METER	WATER PRESSURE GAGE	WATER PUMP
TYPE	HQ	Flow	Standard	Screw
MFG.	Tigre Tierra	Neptune	Trerice	Moyno
MODEL NO.	34B89-436	5/8T-10	--	3L6
I. D. NO.	--	32959930	100 psi	--
WATER PIPE I. D. 1.25 TYPE Galvanized Threaded & Coupled				
SURGE CHAMBER DESCRIPTION 8 inch cylinder with Inlet/outlet				

STATIC WATER LEVEL MEASUREMENTS (ALL MEASUREMENTS ARE IN FEET BELOW GROUND SURFACE)

DATE	ELAPSED TIME (HRS)	WATER LEVEL	BOTTOM OF CASING	BOTTOM OF HOLE	REMARKS / PACKED OFF INTERVAL
9-28-90	2	44.1	64.1	84.1	69.5 ft. to 84.5 ft.

CALCULATED HYDROSTATIC HEAD AT MIDPOINT OF TEST ZONE (PSI) = 14.10 psi
(DEPTH TO STATIC WATER LEVEL—DEPTH TO MIDPOINT OF TEST) x (0.43 PSI / FT)

TIME	ELAPSED TIME (MIN)	PACKER PRESSURE (PSI)	GAUGE PRESSURE (PSI)	METER READING (GALS)	RATE OF FLOW (GALS / MIN)	DEPTH TO WATER IN CASING	REMARKS
11:32	0.0	150	12.0	5929.3	0.0	1.0	After flushing system; begin test
11:33	1.0	150	12.0	5929.3	0.0	1.0	No take
11:34	2.0	150	12.0	5929.3	0.0	1.0	
11:35	3.0	150	12.0	5929.4	0.1	1.0	
11:36	4.0	150	12.0	5929.4	0.0	1.0	
11:37	5.0	150	12.0	5929.4	0.0	1.0	
11:38							
11:39	6.0	150	12.0	5929.4	0.0	1.2	* 11:39:22 Shut down test to
11:45	0.0	190	24.0	5968.5	0.0	1.2	tighten loose fitting adding
11:46	1.0	200	24.0	5968.5	0.0	1.2	teflon tape reflushing system
11:47	2.0	180	24.0	5968.5	0.0	1.2	and restart test.
11:48	3.0	150	24.0	5968.5	0.0	1.2	
11:49	0.0	150	35.0	5968.5	0.0	1.2	
11:50	1.0	150	35.0	5968.5	0.0	1.2	
11:51	2.0	150	35.0	5968.5	0.0	1.2	
11:52	3.0	150	35.0	5968.5	0.0	1.2	



PROJECT	MEDLEY FARMS RI/FS PHASE II
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SEC JOB NO. G-8026

BORING NO. BW110

TEST NO. 2

[illegible]

**WATER PRESSURE
TEST ASSEMBLY
SINGLE PACKER TEST**

BORING NO. BW110 TEST NO. 2

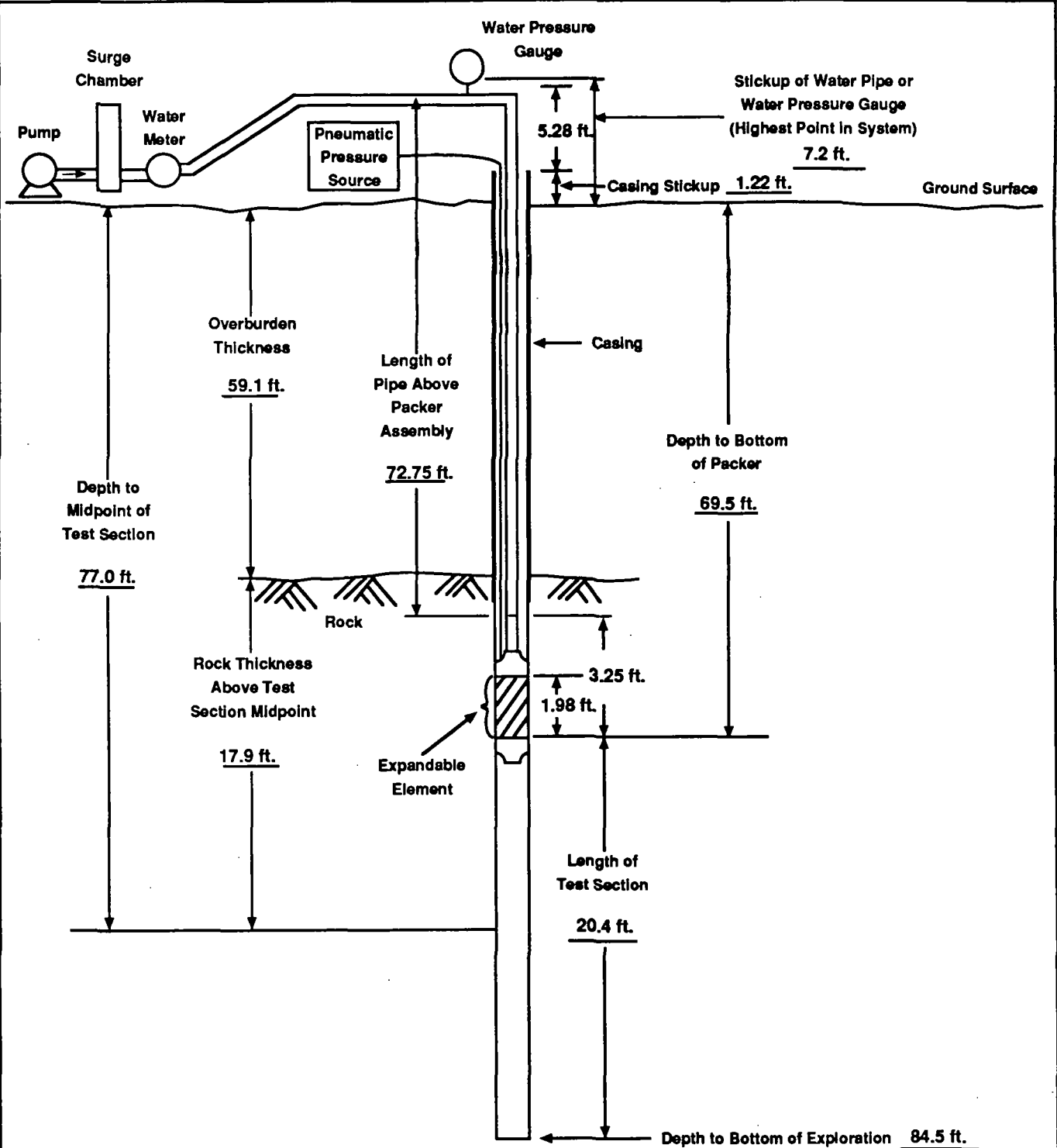
SEC JOB NO. G-8026

PROJECT : MEDLEY FARMS RI/FS PHASE IA

PAGE 3 OF 3

CLIENT : MEDLEY FARMS STEERING COMMITTEE

SEC REP. J. GILLESPIE



Note: Water pressure gauge should be a minimum of 6 pipe diameters away from any elbows or pipe constrictions.



WATER PRESSURE TEST

BORING NO. BW111	TEST NO. 1
SEC JOB NO.: G-8026	
PAGE: 1 OF 3	
DATE START: 10/10/90	
DATE FINISH: 10/10/90	
DRILLER: P. Bergman	
SEC REP.: J. Gillespie/R. Burdine	
TEST INTERVAL (FT) 189.0 TO 209.0	
ROCK TYPE Gneiss	
REMARKS Very Competent Rock	
BOREHOLE DIAMETER (IN) 4.0	
DRILLING METHOD Air Rotary/Conventional Coring	

PROJECT: MEDLEY FARMS RI/FS PHASE II				
CLIENT: MEDLEY FARMS STEERING COMMITTEE				
CONTRACTOR: ATLANTA TESTING AND ENGINEERING				
	PACKER SYSTEM	WATER METER	WATER PRESSURE GAGE	WATER PUMP
TYPE	HQ	Flow	Standard	Screw
MFG.	Tigre Tierra	Rockwell	Trerice	Moyno
MODEL NO.	34B89-436	S-04	--	3L6
I. D. NO.	--	42941689	42941689	--
WATER PIPE I. D. 1.25 TYPE Galvanized Threaded & Coupled				
SURGE CHAMBER DESCRIPTION Cylinder				

STATIC WATER LEVEL MEASUREMENTS (ALL MEASUREMENTS ARE IN FEET BELOW GROUND SURFACE)

DATE	ELAPSED TIME (HRS)	WATER LEVEL	BOTTOM OF CASING	BOTTOM OF HOLE	REMARKS / PACKED OFF INTERVAL
10-10-90		46.0	189.0	209.0	189.0 ft. to 209.0 ft.

CALCULATED HYDROSTATIC HEAD AT MIDPOINT OF TEST ZONE (PSI) = 13.07 psi
(DEPTH TO STATIC WATER LEVEL—DEPTH TO MIDPOINT OF TEST) x (0.43 PSI / FT)

TIME	ELAPSED TIME (MIN)	PACKER PRESSURE (PSI)	GAUGE PRESSURE (PSI)	METER READING (GALS)	RATE OF FLOW (GALS / MIN)	DEPTH TO WATER IN CASING	REMARKS
16:47				0000.0			Purging Air (Flushing System)
16:53	0.0	150	25.0	44.0	0.0	2.1	Start Test.
16:54	1.0	150	25.0	44.0	0.0	2.1	
16:55	2.0	150	25.0	44.0	0.0	2.1	
16:56	3.0	150	25.0	44.0	0.0	2.1	
16:57							
16:58	4.0	150	25.0	44.3	0.0	2.2	
16:59	5.0	150	25.0	44.3	0.0	2.2	Check water flow.
17:00	6.0	150	25.0	44.3	0.0	2.2	
17:01	7.0	150	25.0	44.5	0.2	2.2	
17:02	8.0	150	25.0	44.5	0.0	2.2	
17:03	0.0	150	50.0	44.5	0.0	2.2	
17:05	1.0	150	50.0	44.6	0.1	2.2	
17:06	2.0	150	50.0	44.6	0.0	2.2	
17:07	3.0	150	50.0	44.675	0.075	2.2	
17:08	4.0	150	50.0	44.7	0.025	2.2	* Packer leaking gas.

[illegible]

**WATER PRESSURE
TEST ASSEMBLY
SINGLE PACKER TEST**

BORING NO. BW111 TEST NO. 1

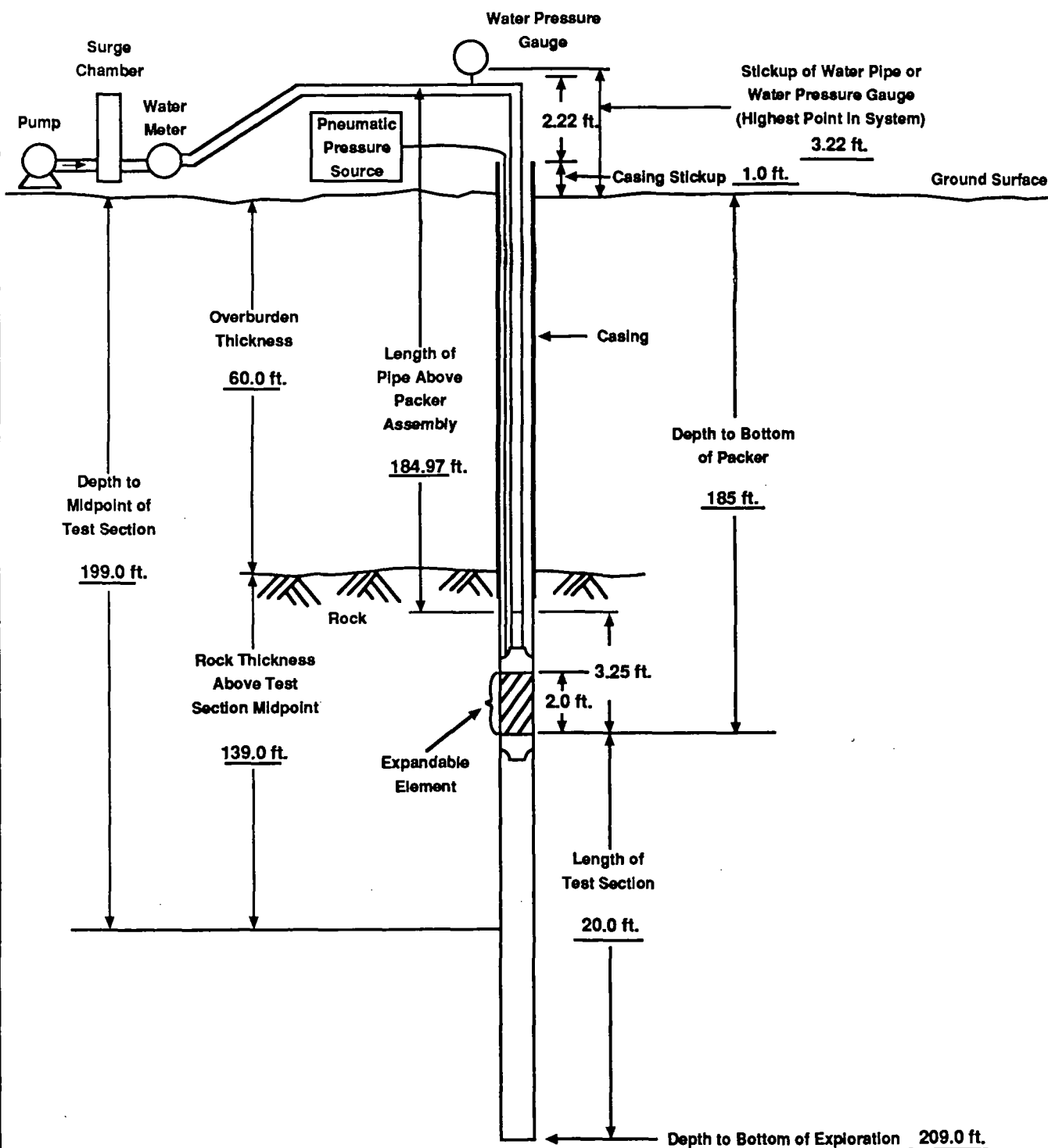
SEC JOB NO. G-8026

PROJECT : MEDLEY FARMS RI/FS PHASE IA

PAGE 3 OF 3

CLIENT : MEDLEY FARMS STEERING COMMITTEE

SEC REP. J. GILLESPIE/R. BURDINE



Note: Water pressure gauge should be a minimum of 6 pipe diameters away from any elbows or pipe constrictions.



**WATER PRESSURE
TEST ASSEMBLY
SINGLE PACKER TEST**

BORING NO. BW111 TEST NO. 2

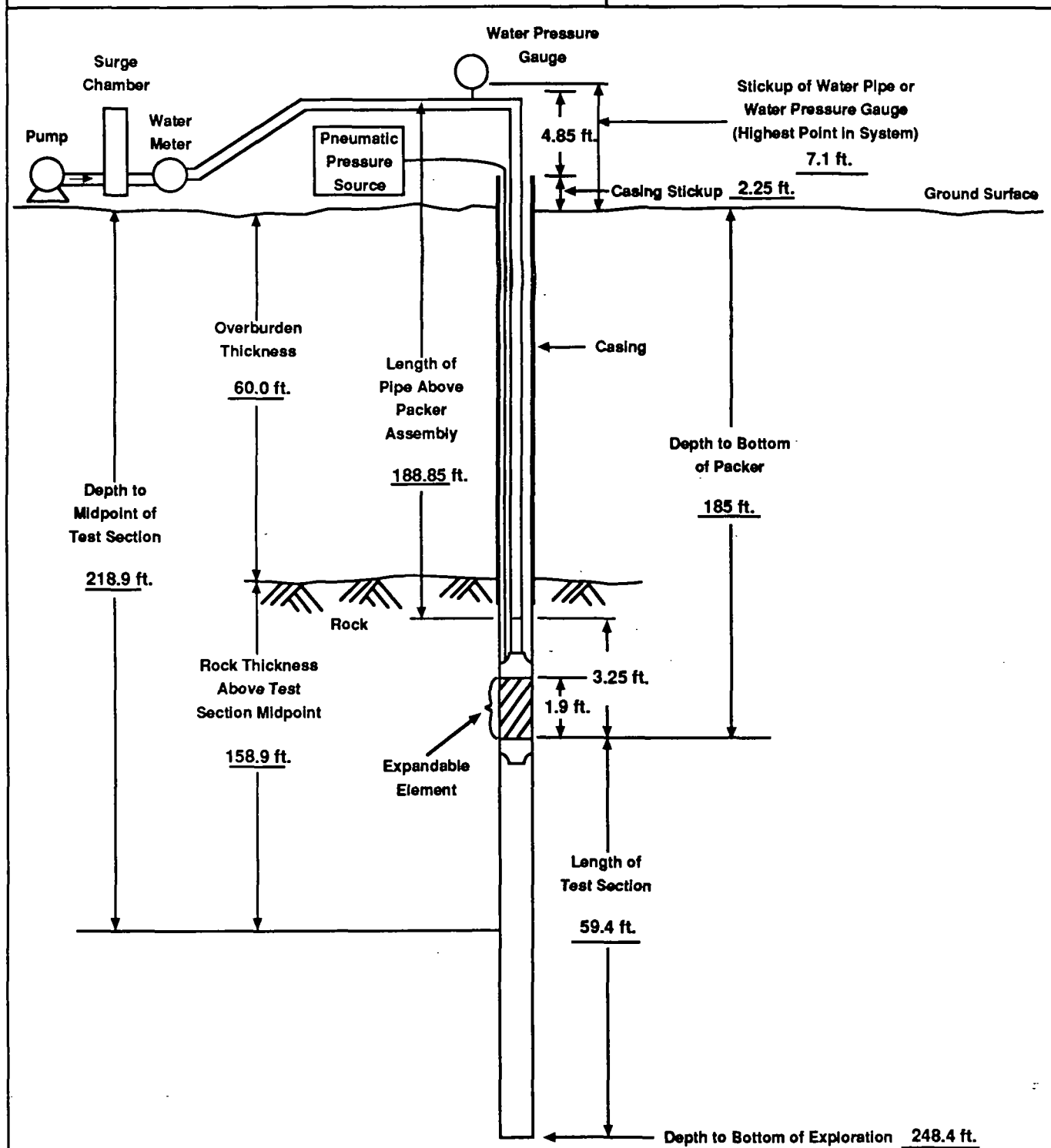
SEC JOB NO. G-8026

PROJECT : MEDLEY FARMS RI/FS PHASE II

PAGE 2 OF 2

CLIENT : MEDLEY FARMS STEERING COMMITTEE

SEC REP. J. GILLESPIE



Note: Water pressure gauge should be a minimum of 6 pipe diameters away from any elbows or pipe constrictions.



WATER PRESSURE TEST

BORING NO. BW112	TEST NO. 1
SEC JOB NO.: G-8026	
PAGE: 1 OF 3	
DATE START: 10/16/90	
DATE FINISH: 10/16/90	
DRILLER: P. Berman	
SEC REP.: J. Gillespie	
TEST INTERVAL (FT) 179.0 TO 199.0	
ROCK TYPE Gneiss	
REMARKS Competent	
BOREHOLE DIAMETER (IN) 4.0	
DRILLING METHOD Conventional Coring	

PROJECT: MEDLEY FARMS RI/FS PHASE II				
CLIENT: MEDLEY FARMS STEERING COMMITTEE				
CONTRACTOR: ATLANTA TESTING AND ENGINEERING				
	PACKER SYSTEM	WATER METER	WATER PRESSURE GAGE	WATER PUMP
TYPE	HQ	Flow	Standard	Screw
MFG.	Tigre Tierra	Rockwell	Trerice	Moyno
MODEL NO.	34B89-436	S-04	--	3L6
I. D. NO.	--	42941689	100 psi	--
WATER PIPE I. D. 1.25 TYPE Galvanized				
SURGE CHAMBER DESCRIPTION Cylinder with two ports				

STATIC WATER LEVEL MEASUREMENTS (ALL MEASUREMENTS ARE IN FEET BELOW GROUND SURFACE)

DATE	ELAPSED TIME (HRS)	WATER LEVEL	BOTTOM OF CASING	BOTTOM OF HOLE	REMARKS / PACKED OFF INTERVAL

CALCULATED HYDROSTATIC HEAD AT MIDPOINT OF TEST ZONE (PSI) = _____
 (DEPTH TO STATIC WATER LEVEL—DEPTH TO MIDPOINT OF TEST) x (0.43 PSI / FT)

TIME	ELAPSED TIME (MIN)	PACKER PRESSURE (PSI)	GAUGE PRESSURE (PSI)	METER READING (GALS)	RATE OF FLOW (GALS / MIN)	DEPTH TO WATER IN CASING	REMARKS
09:40				45.5			Begin purging system.
09:45	0.0	220	24.0	80.5	0.0	16.0	Inflate packer and begin test.
09:46	1.0	220	24.0	80.6	0.1	16.0	
09:47	2.0	220	24.0	80.6	0.0	16.0	
09:48	3.0	220	24.0	80.6	0.0	16.0	
09:49	4.0	220	24.0	80.6	0.0	16.0	
09:50	5.0	220	24.0	80.6	0.0	16.0	
09:51	6.0	220	24.0	80.7	0.1	16.0	
09:52	7.0	220	24.0	80.7	0.0	16.0	
09:53	8.0	220	24.0	80.7	0.0	16.0	
09:54	9.0	220	24.0	80.7	0.0	16.0	
09:55	0.0	220	48.0	80.8	0.1	16.0	
09:56	1.0	220	48.0	80.8	0.0	18.25	
09:57	2.0	220	48.0	80.9	0.1	18.25	
09:58	3.0	220	48.0	80.9	0.0	18.25	
09:59	4.0	220	48.0	81.0	0.1	18.25	



WATER PRESSURE TEST

PAGE 2 OF 3

PROJECT MEDLEY FARMS RI/FS PHASE II

SEC JOB NO. G-8026

BORING NO. **BW112**

TEST NO. _____ 1

[illegible]

**WATER PRESSURE
TEST ASSEMBLY
SINGLE PACKER TEST**

BORING NO. BW112 TEST NO. 1

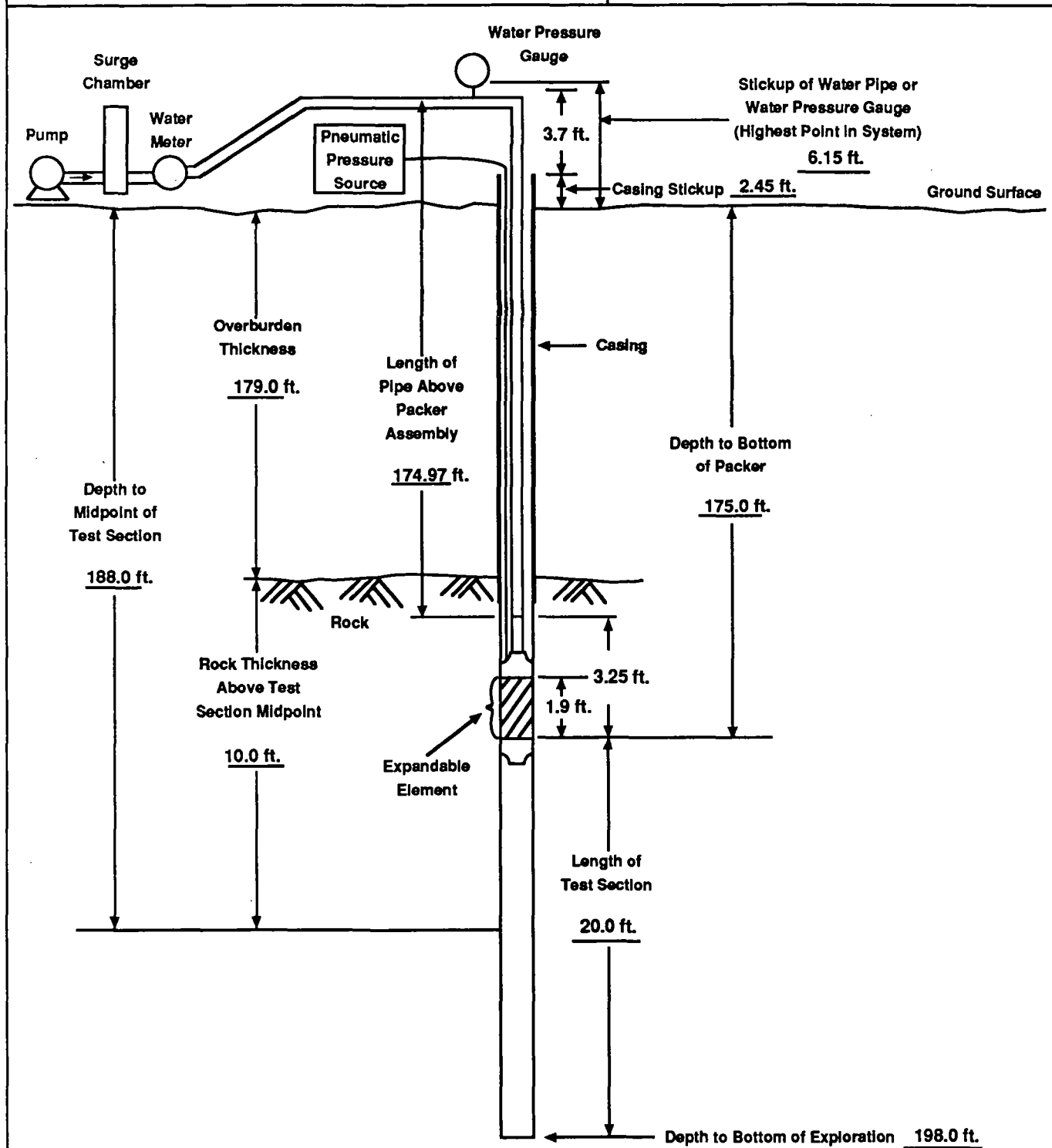
SEC JOB NO. G-8026

PROJECT: MEDLEY FARMS RI/FS PHASE II

PAGE 3 OF 3

CLIENT: MEDLEY FARMS STEERING COMMITTEE

SEC REP. J. GILLESPIE



Note: Water pressure gauge should be a minimum of 6 pipe diameters away from any elbows or pipe constrictions.



WATER PRESSURE TEST

BORING NO. BW112	TEST NO. 2
SEC JOB NO.: G-8026	
PAGE: 1 OF 3	
DATE START: 10/24/90	
DATE FINISH: 10/24/90	
DRILLER: P. Berman	
SEC REP.: J. Gillespie	
TEST INTERVAL (FT) 179.0 TO 239.0	
ROCK TYPE Amphibole Gneiss	
REMARKS	
BOREHOLE DIAMETER (IN) 3.75	
DRILLING METHOD	
Wire Line Coring	

PROJECT: MEDLEY FARMS RI/FS PHASE II				
CLIENT: MEDLEY FARMS STEERING COMMITTEE				
CONTRACTOR: ATLANTA TESTING AND ENGINEERING				
	PACKER SYSTEM	WATER METER	WATER PRESSURE GAGE	WATER PUMP
TYPE	HQ	Flow	Standard	Screw
MFG.	Tigre Tierra	Rockwell	Trerice	Moyno
MODEL NO.	34B89-436	S-04	--	3L6
I. D. NO.	--	42941689	100 psi	--
WATER PIPE I. D. 1.25 TYPE Galvanized				
SURGE CHAMBER DESCRIPTION				

STATIC WATER LEVEL MEASUREMENTS (ALL MEASUREMENTS ARE IN FEET BELOW GROUND SURFACE)

DATE	ELAPSED TIME (HRS)	WATER LEVEL	BOTTOM OF CASING	BOTTOM OF HOLE	REMARKS / PACKED OFF INTERVAL
10-24-90	4	42.0	179.0	239.0	

CALCULATED HYDROSTATIC HEAD AT MIDPOINT OF TEST ZONE (PSI) = _____
(DEPTH TO STATIC WATER LEVEL—DEPTH TO MIDPOINT OF TEST) x (0.43 PSI / FT)

TIME	ELAPSED TIME (MIN)	PACKER PRESSURE (PSI)	GAUGE PRESSURE (PSI)	METER READING (GALS)	RATE OF FLOW (GALS / MIN)	DEPTH TO WATER IN CASING	REMARKS
14:40				418.0			Begin purging system.
14:41	0.0	160	27.0	432.4	0.0		Water remaining static in
14:42	1.0	160	27.0	432.4	0.0		casing. No bubbling.
14:43	2.0	160	27.0	432.4	0.0		
14:44	3.0	160	27.0	432.4	0.0		
14:45	0.0	160	54.0	432.5	0.1		
14:46	1.0	160	54.0	432.6	0.1		
14:47	2.0	160	54.0	432.6	0.0		
14:48	3.0	160	54.0	432.7	0.1		
14:49	0.0	160	81.0	432.9	0.2		
14:50	1.0	160	81.0	432.9	0.0		
14:51	2.0	160	81.0	432.9	0.0		



WATER PRESSURE TEST

PROJECT MEDLEY FARMS RI/FS PHASE II

PAGE 2 OF 3

SEC JOB NO. G-8026

BORING NO. BW112

TEST NO. 2

[illegible]

**WATER PRESSURE
TEST ASSEMBLY
SINGLE PACKER TEST**

BORING NO. BW112 TEST NO. 2

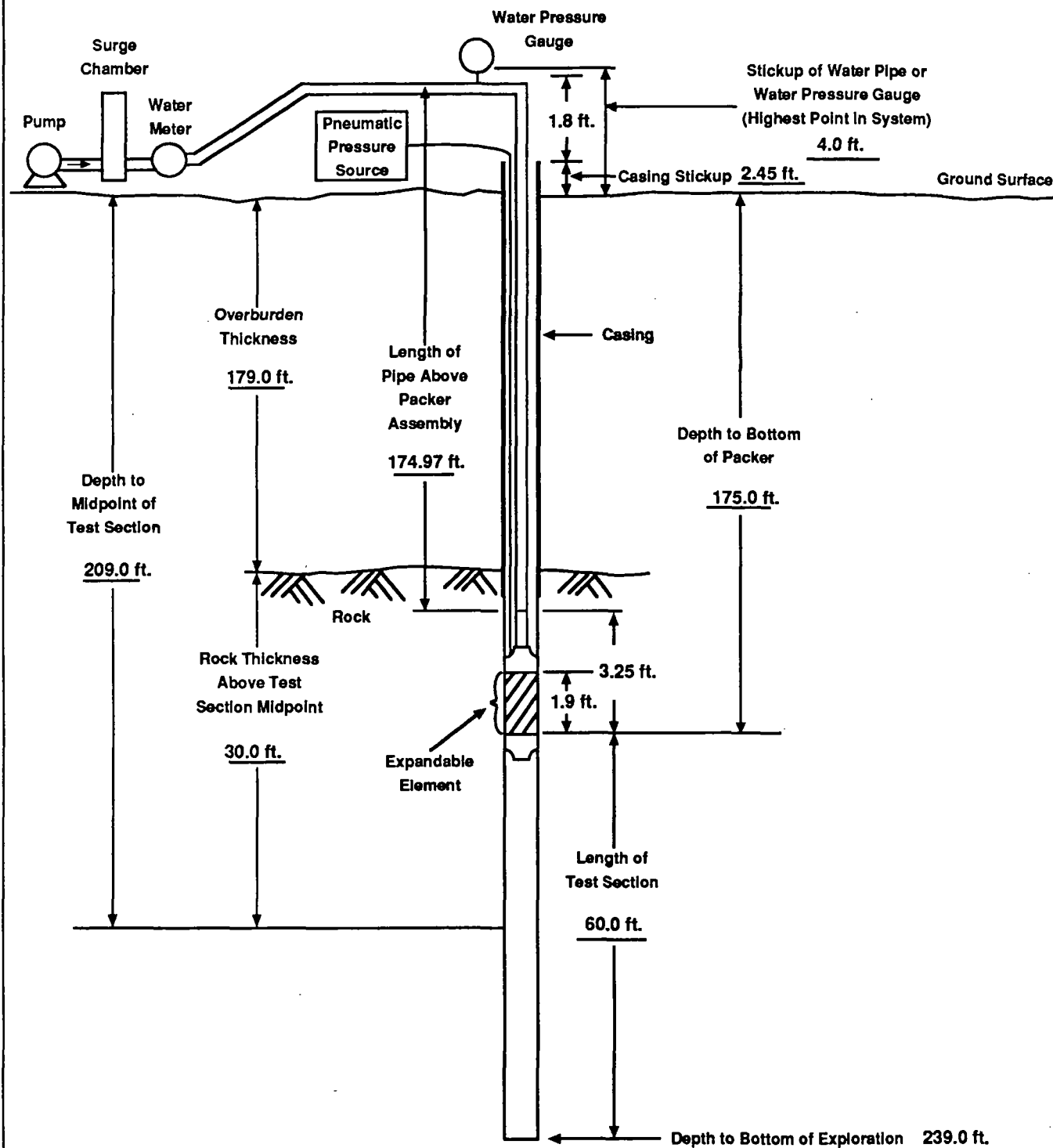
SEC JOB NO. G-8026

PROJECT : MEDLEY FARMS RI/FS PHASE II

PAGE 3 OF 3

CLIENT : MEDLEY FARMS STEERING COMMITTEE

SEC REP. J. GILLESPIE



Note: Water pressure gauge should be a minimum of 6 pipe diameters away from any elbows or pipe constrictions.

APPENDIX H
SLUG TEST DATA

SUMMARY OF FIELD PERMEABILITY TEST RESULTS

SLUG TEST ANALYSIS - MODIFIED BOUWER-RICE METHOD

Client: MEDLEY FARM RI/FS

Location: GAFFNEY, SOUTH CAROLINA

Job Number: G-8026

Porosity of the sand pack: 0.30

Well

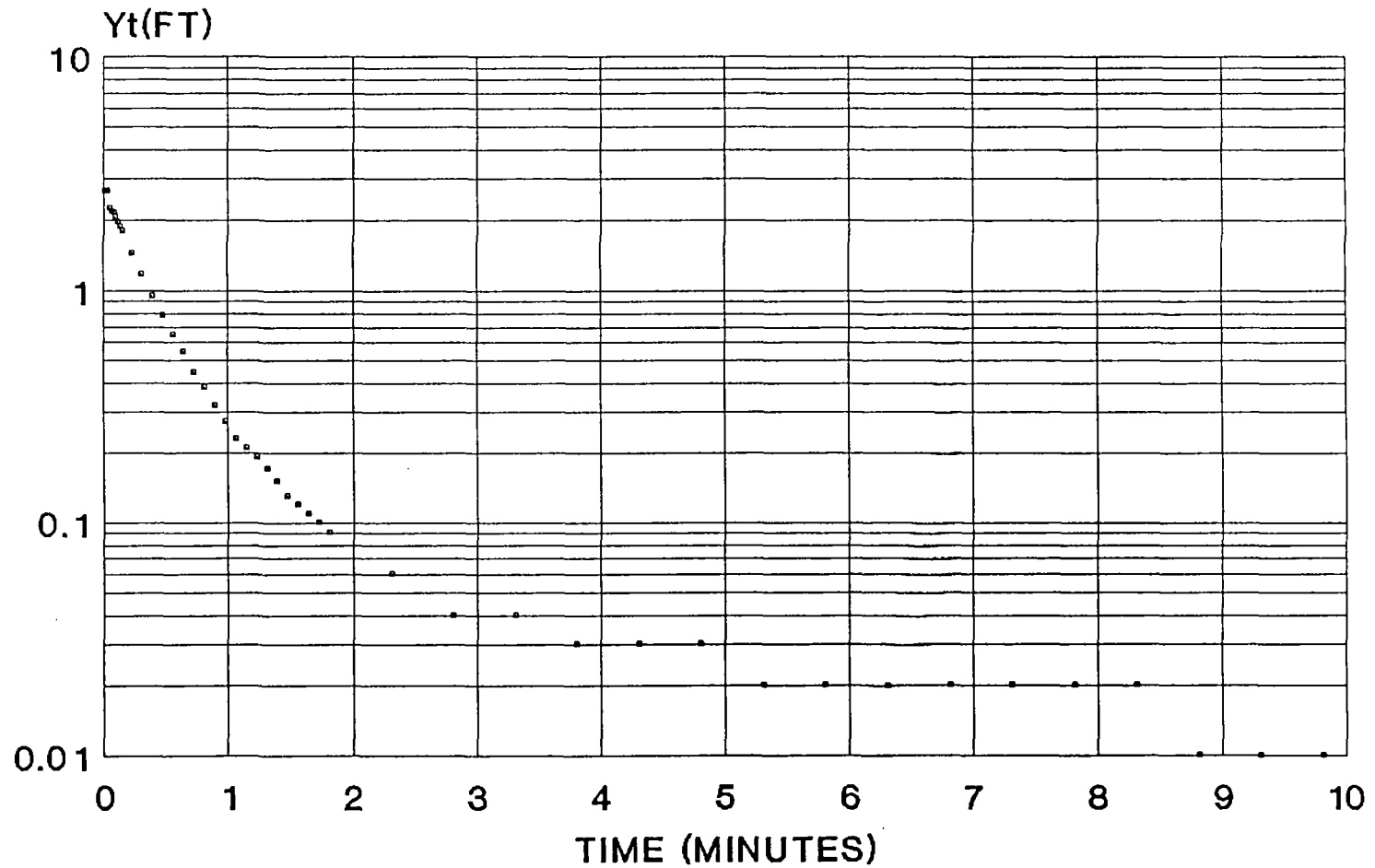
Number	Rc(ft)	rc'(ft)	Le(ft)	rw(ft)	Le/rw	Lw(ft)	H(ft)	A	B	C	yo(ft)	yt(ft)	t(sec)	K(ft/sec)	K(ft/day)	K(cm/sec)	T(gpd/ft)
BW1-F	0.158	0.158	9.20	0.158	58.23	44.44	50.0	3.208	0.533	2.916	0.963	0.010	208.20	1.05E-04	9.10	3.21E-03	3,402
BW1-R	0.158	0.158	9.20	0.158	58.23	44.44	50.0	3.208	0.533	2.916	1.844	0.010	178.20	1.40E-04	12.14	4.28E-03	4,539
BW2-F	0.158	0.158	20.64	0.158	130.63	18.36	50.0	4.875	0.840	4.875	0.471	0.010	102.60	7.50E-05	6.48	2.29E-03	2,424
BW2-R	0.158	0.158	20.64	0.158	130.63	18.36	50.0	4.875	0.840	4.875	0.500	0.010	109.80	7.12E-05	6.15	2.17E-03	2,300
BW3-F	0.158	0.158	20.00	0.158	126.58	48.84	50.0	4.833	0.791	4.833	2.850	0.010	219.00	6.64E-05	5.74	2.02E-03	2,147
BW3-R	0.158	0.158	20.00	0.158	126.58	48.84	50.0	4.833	0.791	4.833	3.350	0.010	252.00	5.94E-05	5.13	1.81E-03	1,919
BW4-F	0.158	0.158	13.00	0.158	82.28	25.94	50.0	3.933	0.646	3.666	2.150	1.180	300.00	6.52E-06	0.56	1.99E-04	211
BW4-R	0.158	0.158	13.00	0.158	82.28	25.94	50.0	3.933	0.646	3.666	2.111	0.900	480.00	5.63E-06	0.49	1.72E-04	182
SW1-R	0.083	0.238	15.20	0.416	36.54	8.28	50.0	2.600	0.396	2.266	0.073	0.060	600.00	1.25E-06	0.11	3.80E-05	40
SW3-R	0.083	0.238	15.20	0.416	36.54	8.76	50.0	2.600	0.396	2.266	0.208	0.100	111.00	2.56E-05	2.21	7.79E-04	826
SW4-R	0.083	0.238	15.20	0.416	36.54	8.34	50.0	2.600	0.396	2.266	0.175	0.148	120.00	5.34E-06	0.46	1.63E-04	173
SW102-R	0.083	0.238	8.65	0.416	20.79	8.65	50.0	2.210	0.350	1.710	0.253	0.090	120.00	5.17E-05	4.47	1.58E-03	1,671
SW103-R	0.083	0.238	7.38	0.416	17.74	7.38	50.0	2.120	0.330	1.570	0.166	0.131	420.00	3.69E-06	0.32	1.12E-04	119
SW104-R	0.083	0.238	11.63	0.416	27.96	11.63	50.0	2.430	0.396	2.000	1.000	0.090	480.00	2.54E-05	2.20	7.75E-04	822
SW106-R	0.083	0.238	13.72	0.416	32.98	13.72	50.0	2.590	0.420	2.190	0.900	0.070	420.00	2.79E-05	2.41	8.51E-04	903
SW108-R	0.083	0.238	13.76	0.416	33.08	13.76	50.0	2.590	0.420	2.200	1.250	0.600	3360.00	1.00E-06	0.09	3.05E-05	32
SW109-R	0.083	0.238	7.26	0.416	17.45	7.26	50.0	2.110	0.330	1.560	1.270	0.217	120.00	9.70E-05	8.38	2.96E-03	3,134

F=INDICATES FALLING HEAD SLUG TEST

R=INDICATES RISING HEAD SLUG TEST

MEDLEY FARM RI/FS

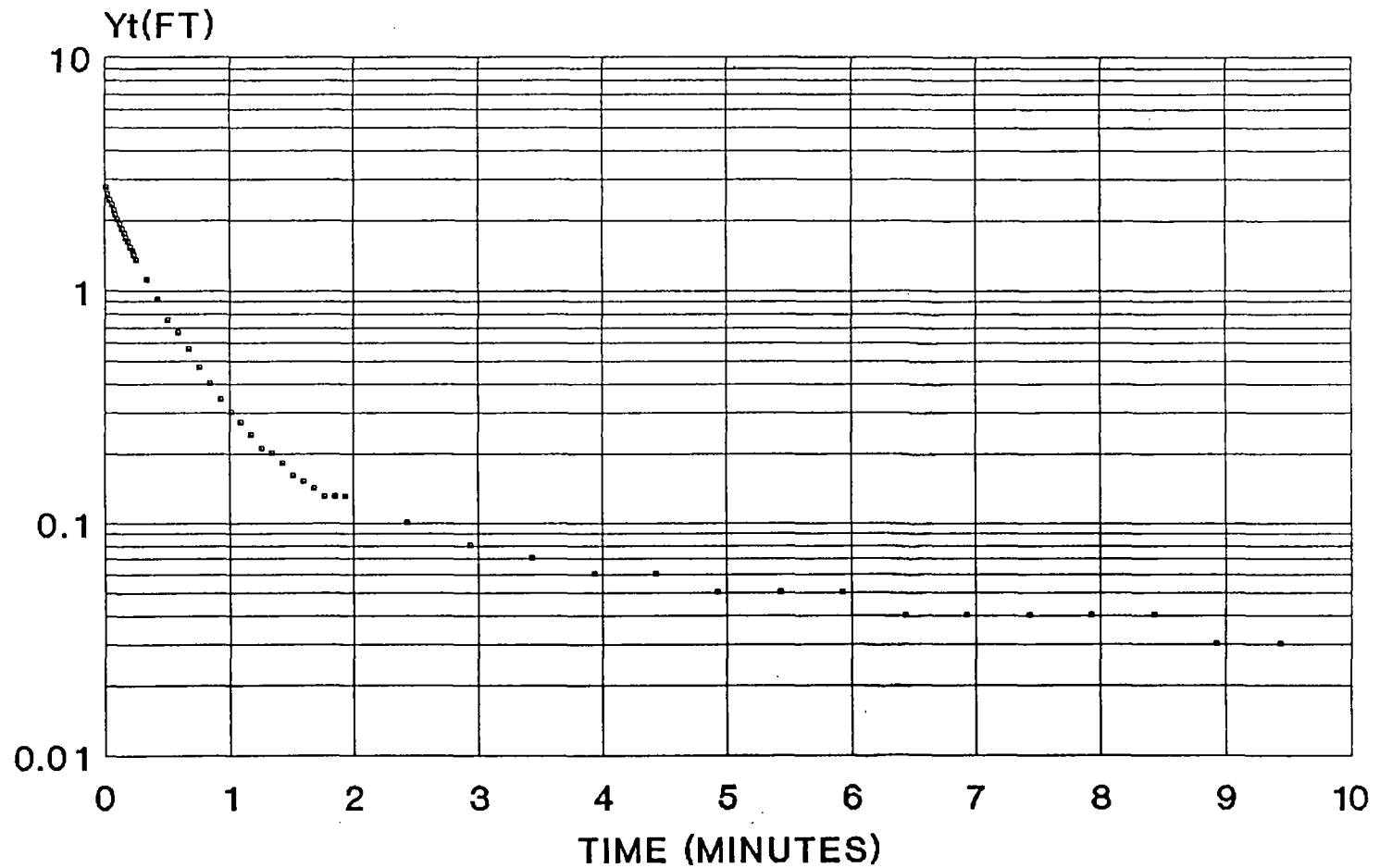
FALLING HEAD SLUG TEST FOR BW1



MODIFIED BOUWER-RICE METHOD
DATE: 04 FEBRUARY 1990

MEDLEY FARM RI/FS

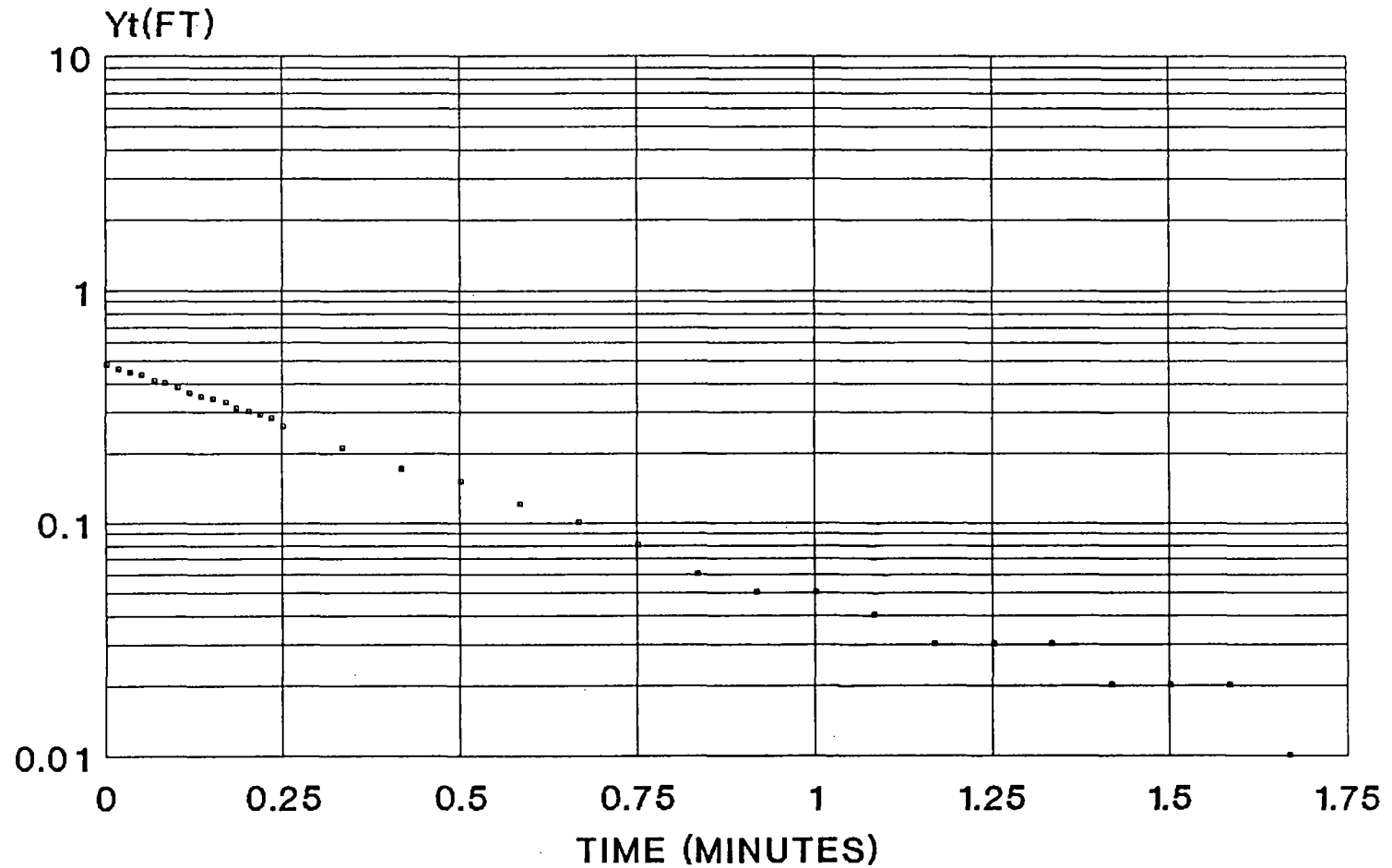
RISING HEAD SLUG TEST FOR BW1



MODIFIED BOUWER-RICE METHOD
DATE: 04 FEBRUARY 1990

MEDLEY FARM RI/FS

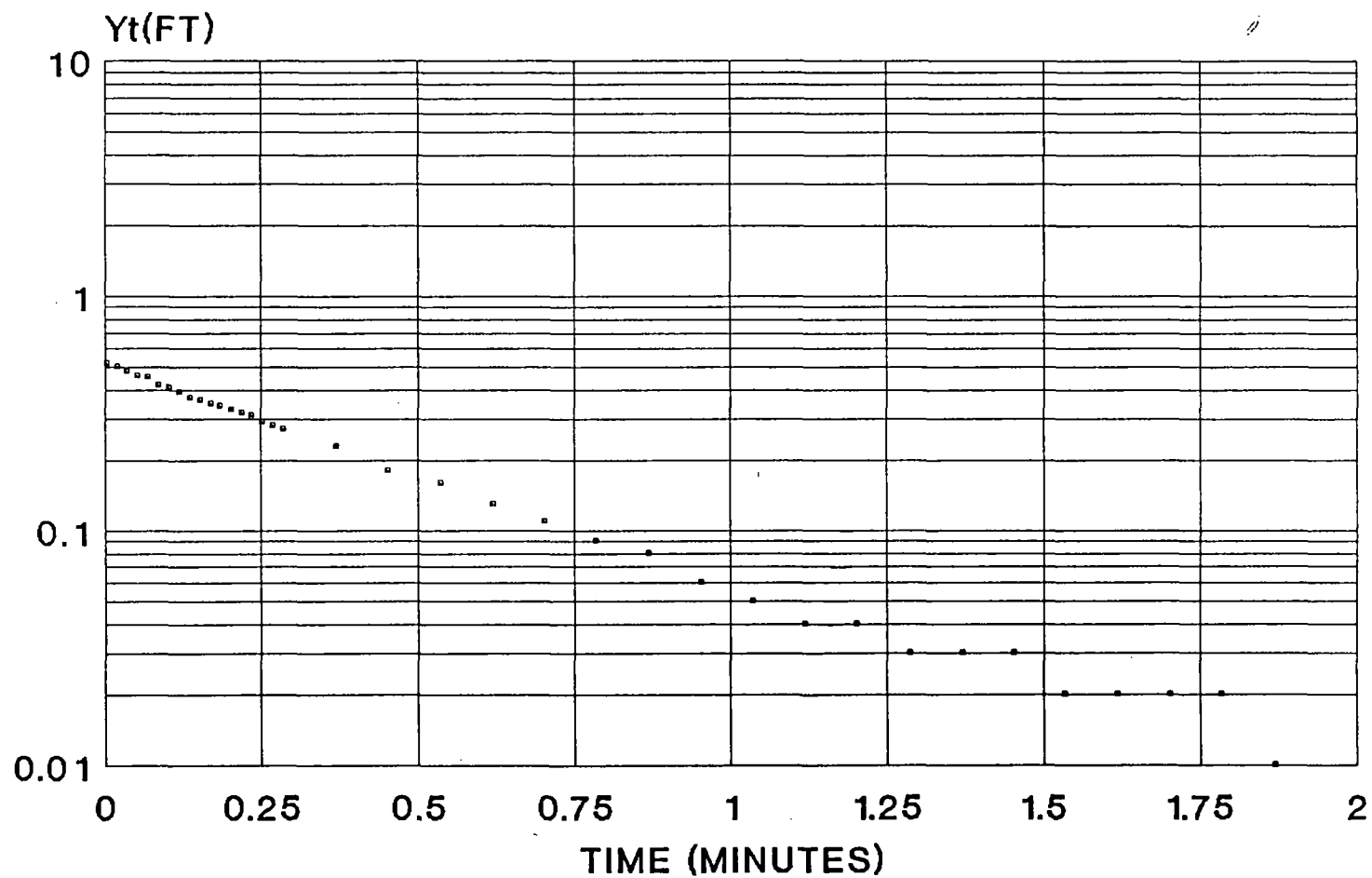
FALLING HEAD SLUG TEST FOR BW2



MODIFIED BOUWER-RICE METHOD
DATE: 04 FEBRUARY 1990

MEDLEY FARM RI/FS

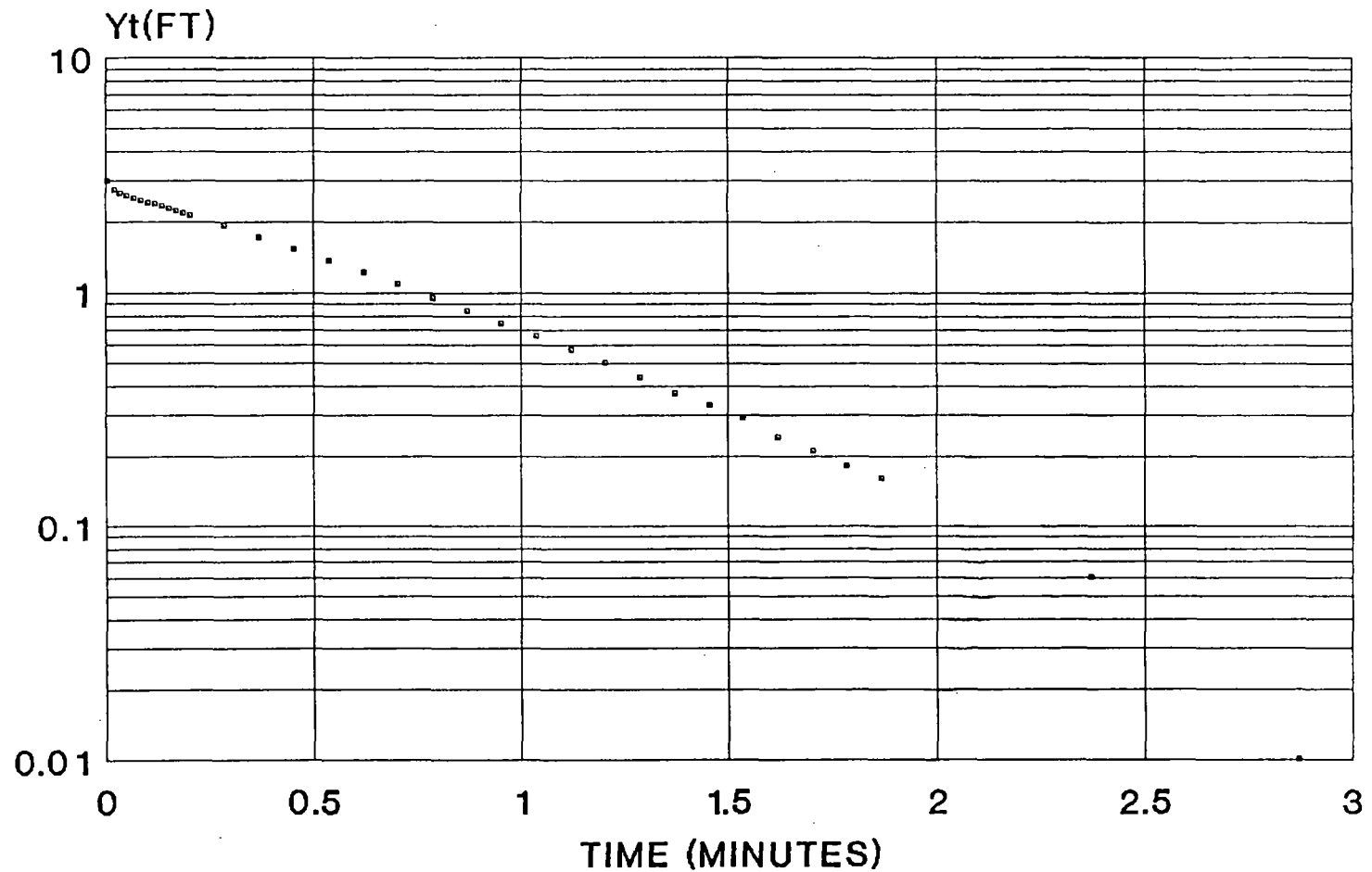
RIISING HEAD SLUG TEST FOR BW2



MODIFIED BOUWER-RICE METHOD
DATE: 04 FEBRUARY 1990

MEDLEY FARM RI/FS

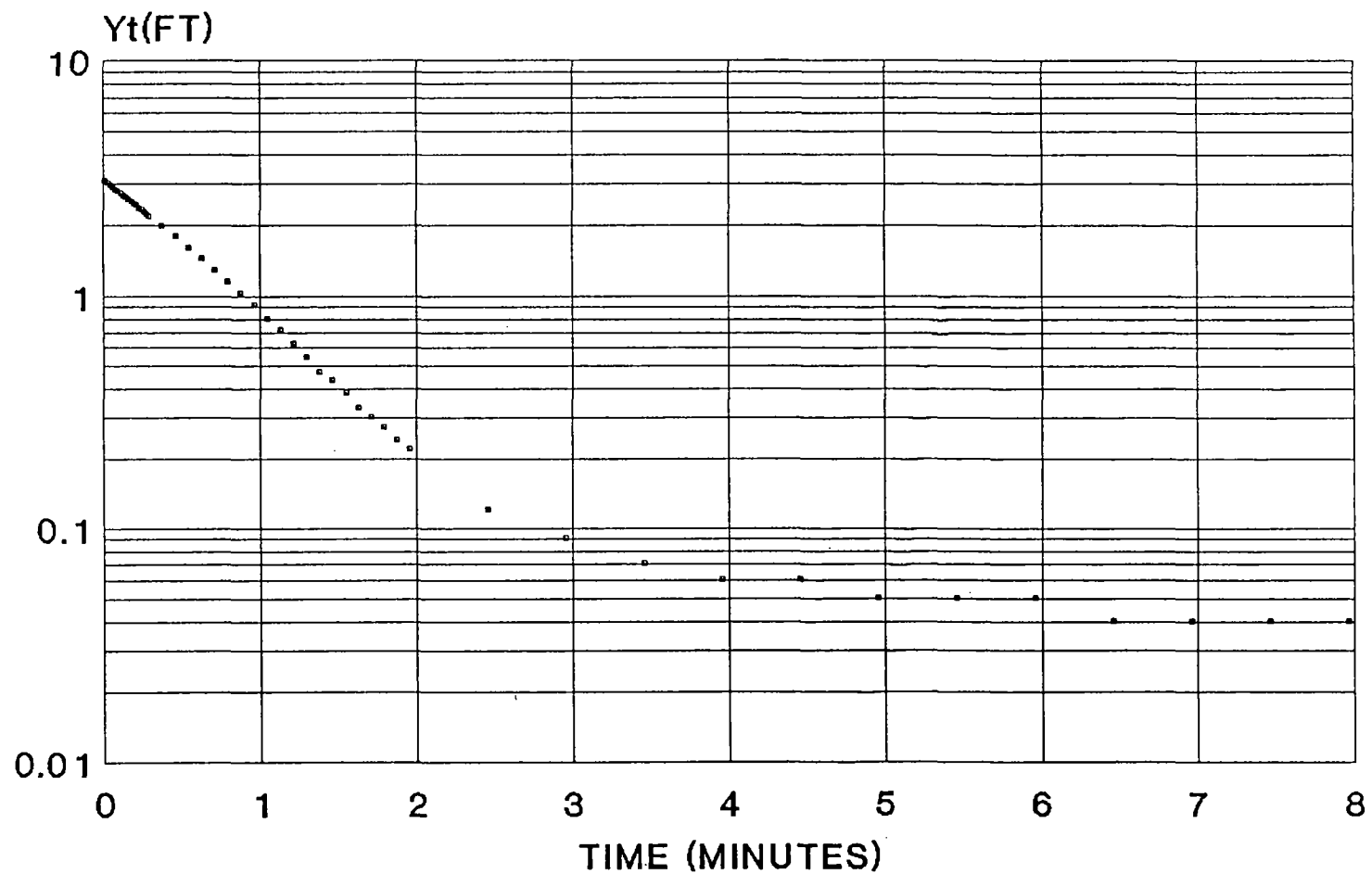
FALLING HEAD SLUG TEST FOR BW3



MODIFIED BOUWER-RICE METHOD
DATE: 04 FEBRUARY 1990

MEDLEY FARM RI/FS

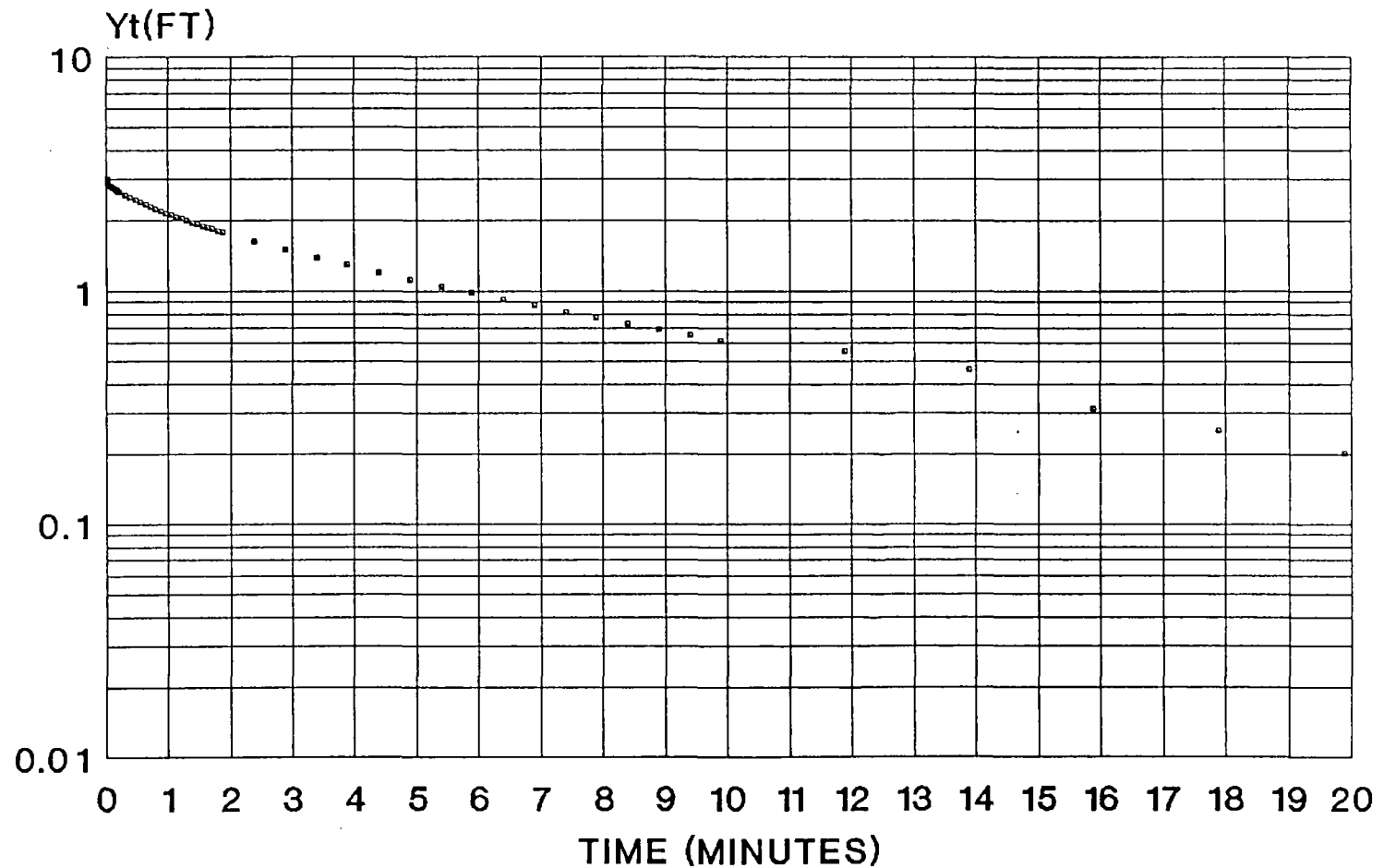
RISING HEAD SLUG TEST FOR BW3



MODIFIED BOUWER-RICE METHOD
DATE: 04 FEBRUARY 1990

MEDLEY FARM RI/FS

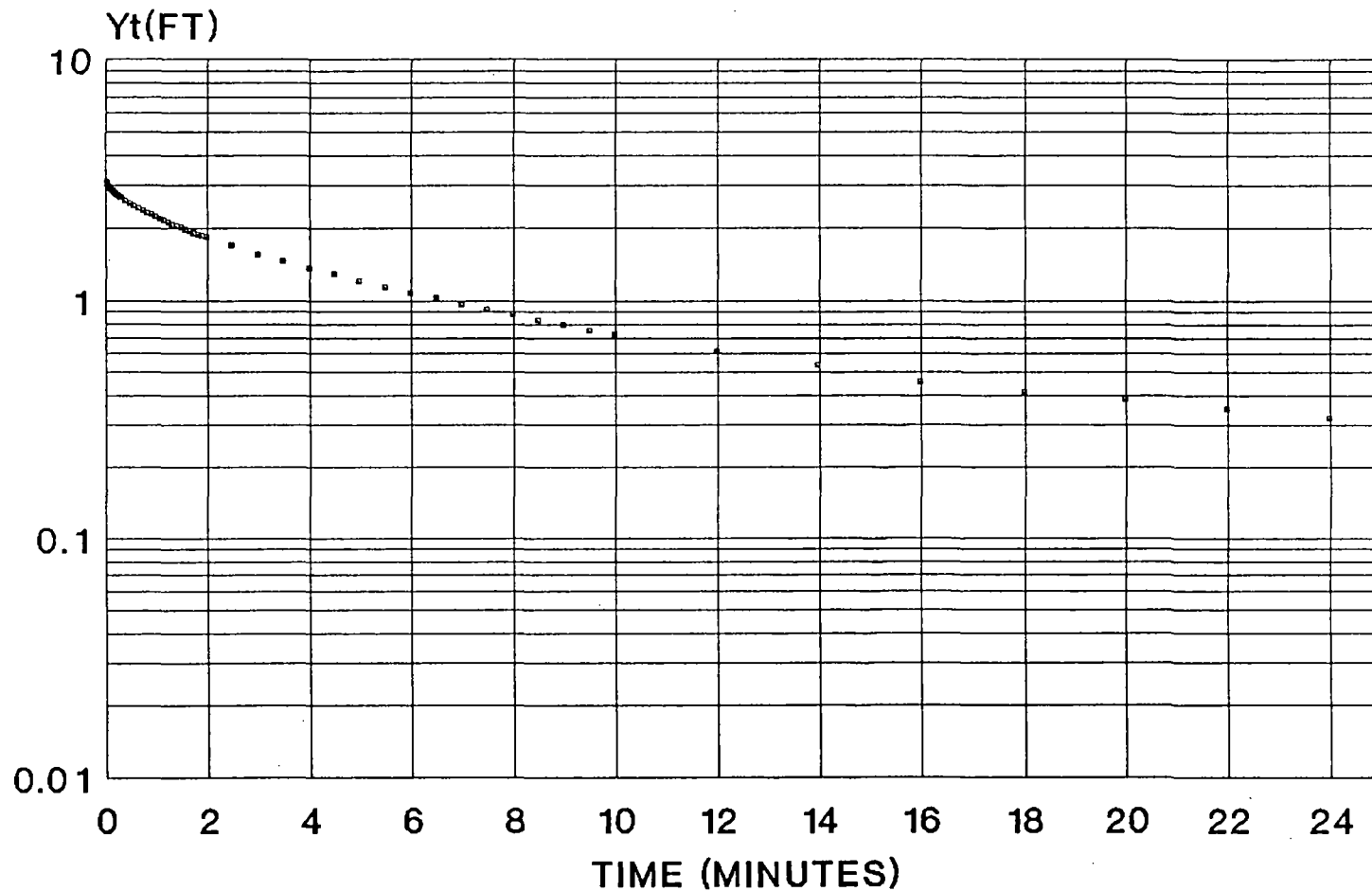
FALLING HEAD SLUG TEST FOR BW4



MODIFIED BOUWER-RICE METHOD
DATE: 04 FEBRUARY 1990

MEDLEY FARM RI/FS

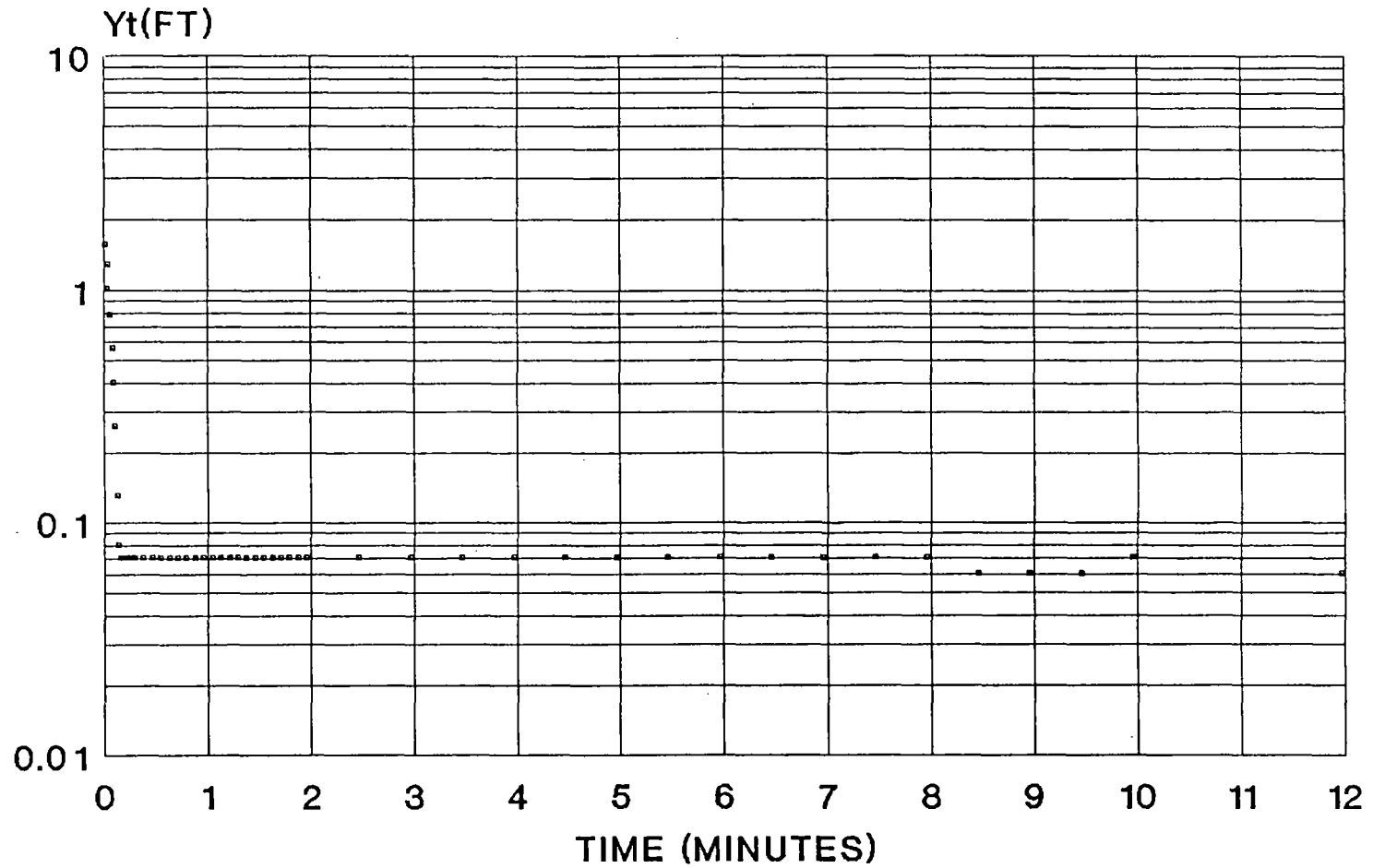
RISING HEAD SLUG TEST FOR BW4



MODIFIED BOUWER-RICE METHOD
DATE: 04 FEBRUARY 1990

MEDLEY FARM RI/FS

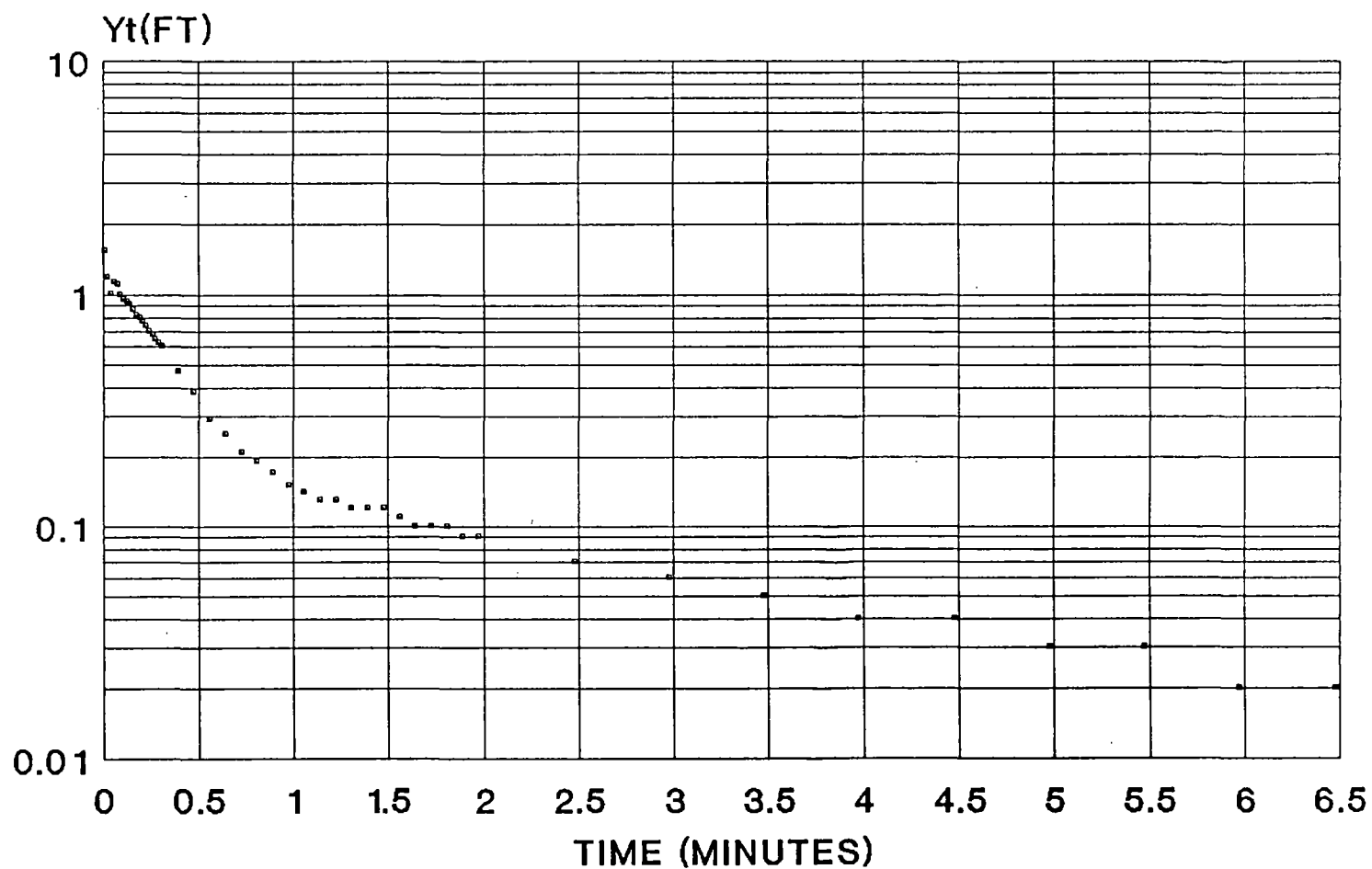
RISING HEAD SLUG TEST FOR SW1



MODIFIED BOUWER-RICE METHOD
DATE: 04 FEBRUARY 1990

MEDLEY FARM RI/FS

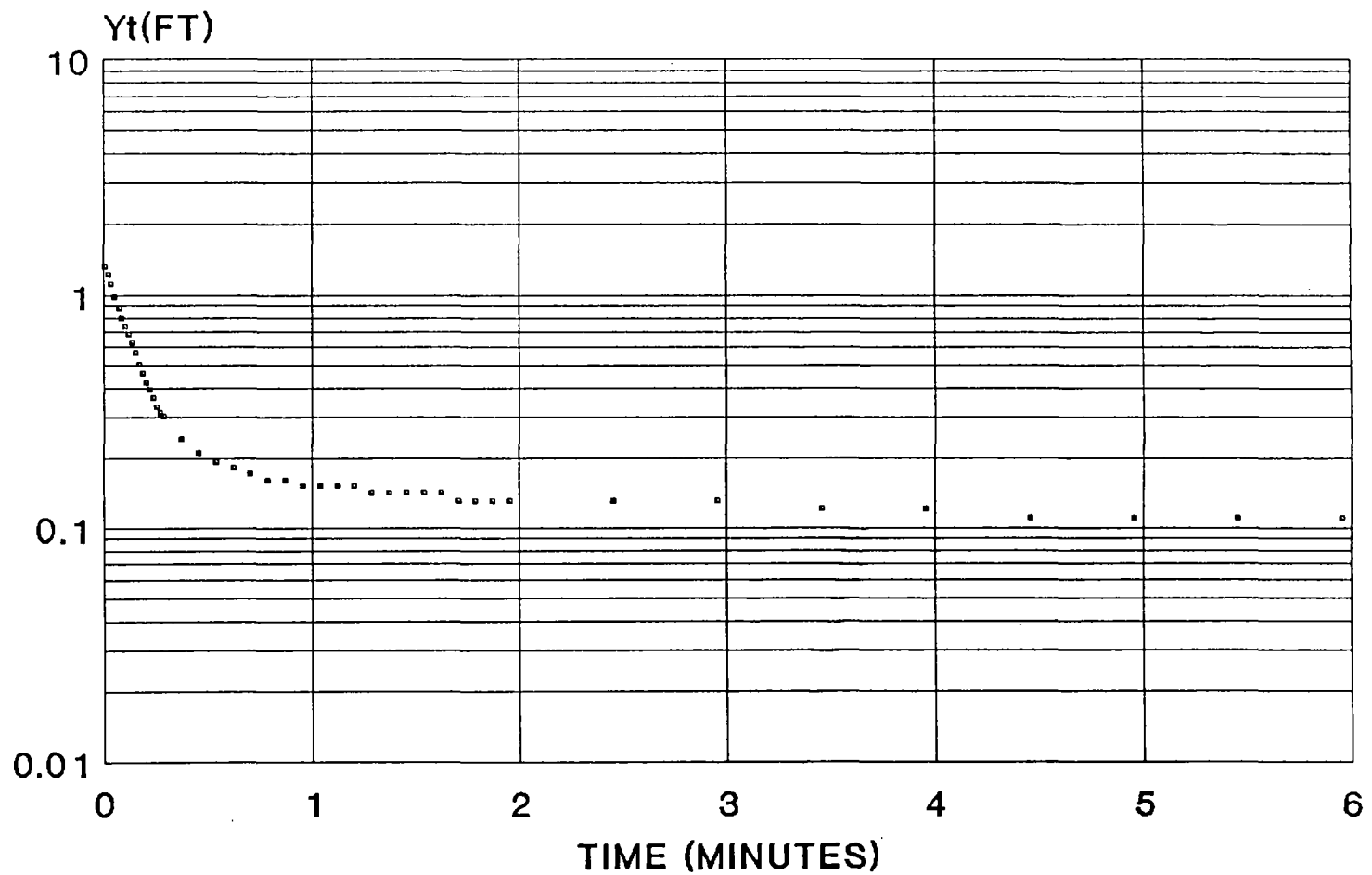
RISING HEAD SLUG TEST FOR SW3



MODIFIED BOUWER-RICE METHOD
DATE: 04 FEBRUARY 1990

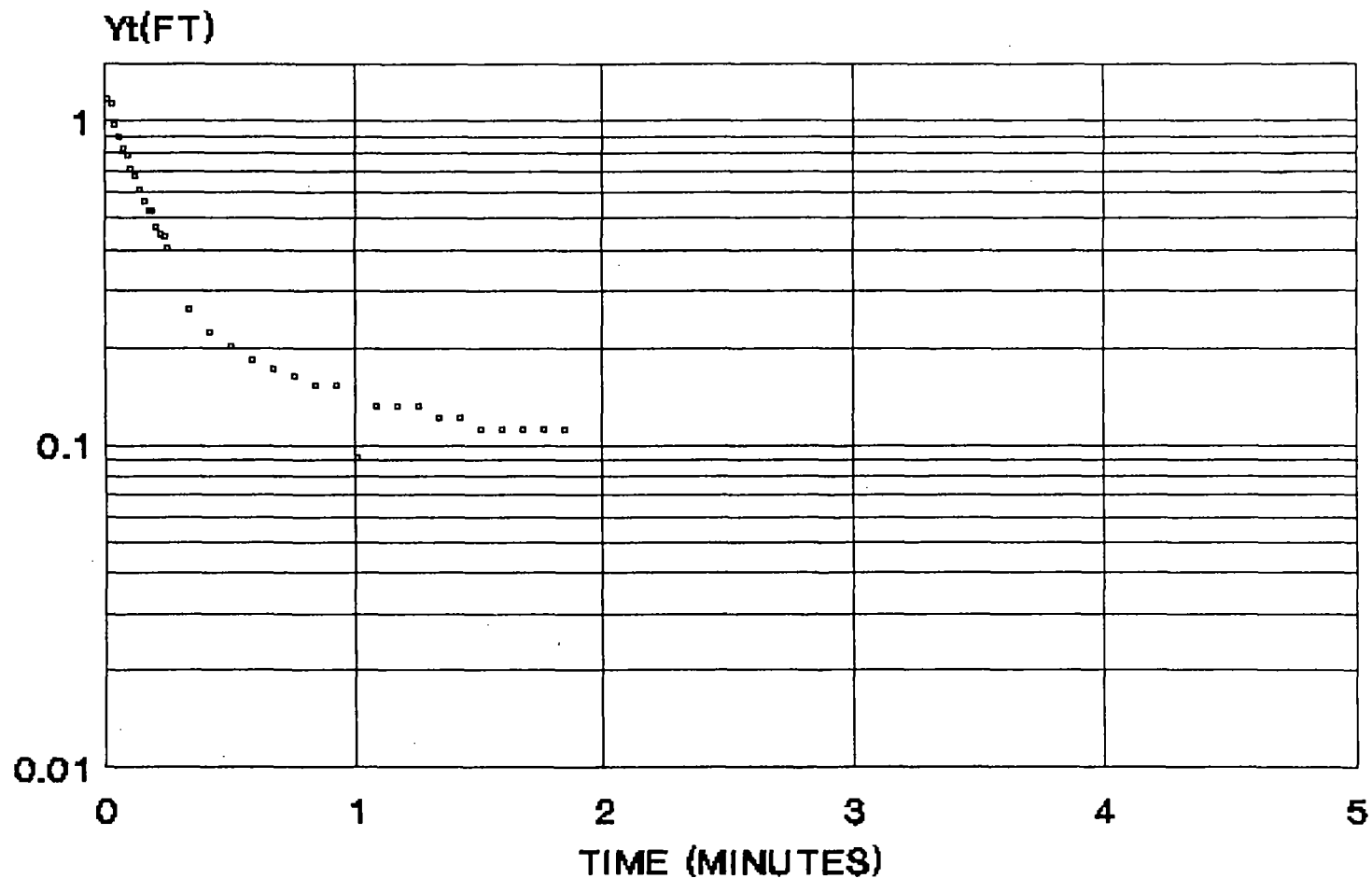
MEDLEY FARM RI/FS

RISING HEAD SLUG TEST FOR SW4



MODIFIED BOUWER-RICE METHOD
DATE: 04 FEBRUARY 1990

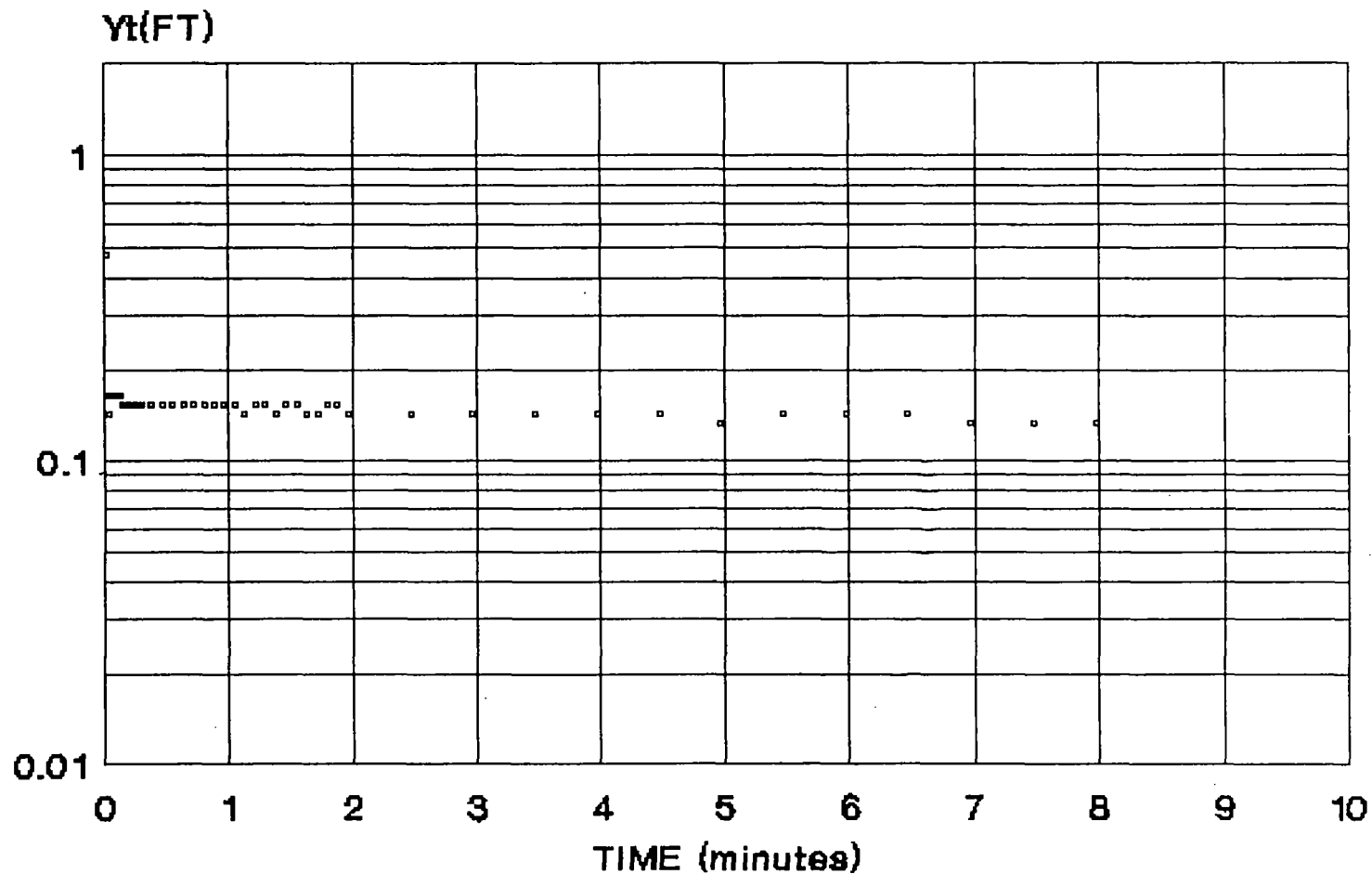
MEDLEY FARMS ,GAFFNEY ,SC
SLUG TEST FOR WELL SW102



MODIFIED BOUWER-RICE METHOD
DATE: 05 NOVEMBER 1990

MEDLEY FARMS GAFFNEY, SC

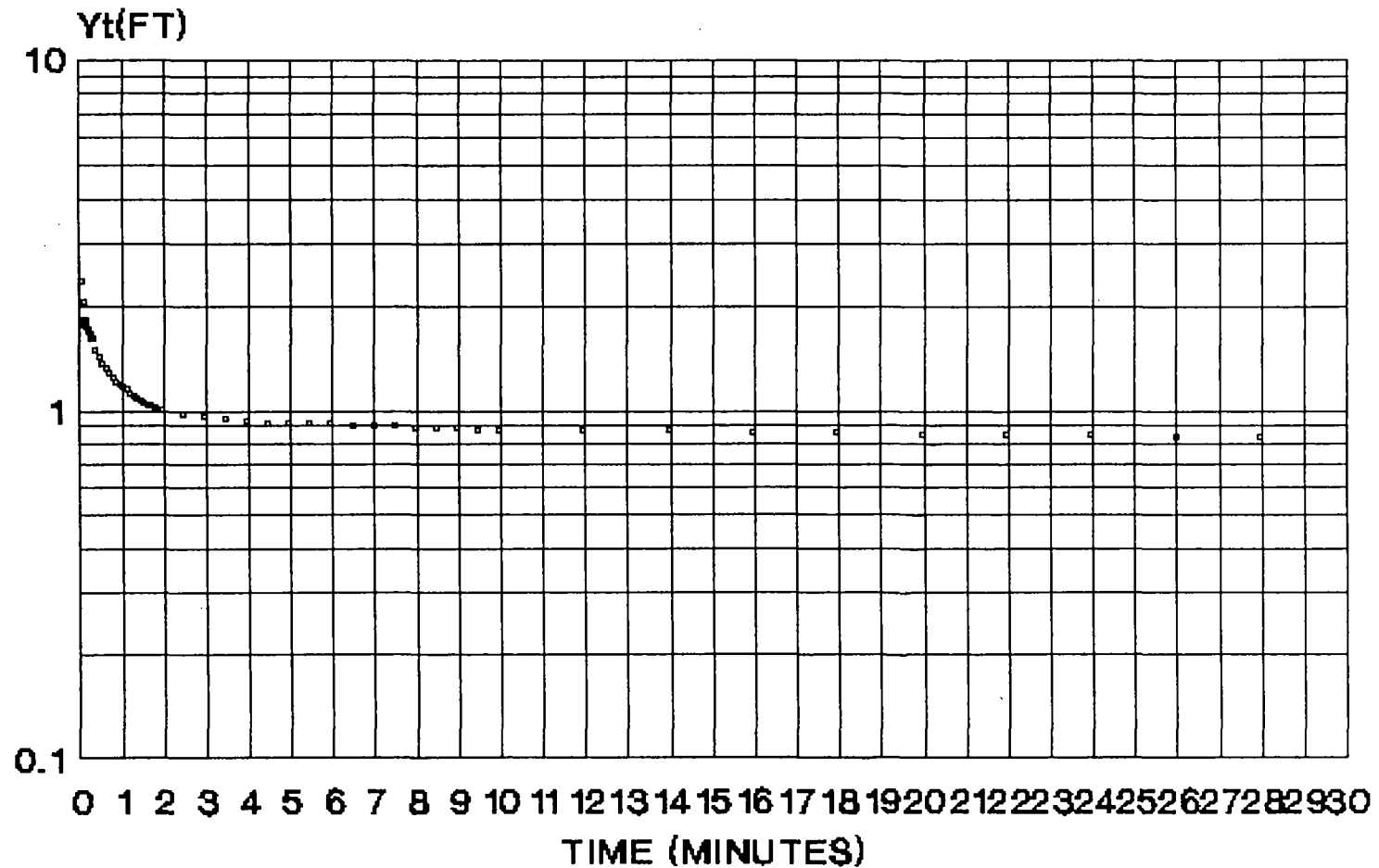
SLUG TEST FOR WELL SW103



MODIFIED BOUWER-RICE METHOD
DATE: 05 NOVEMBER 1990

MEDLEY FARMS GAFFNEY ,SC

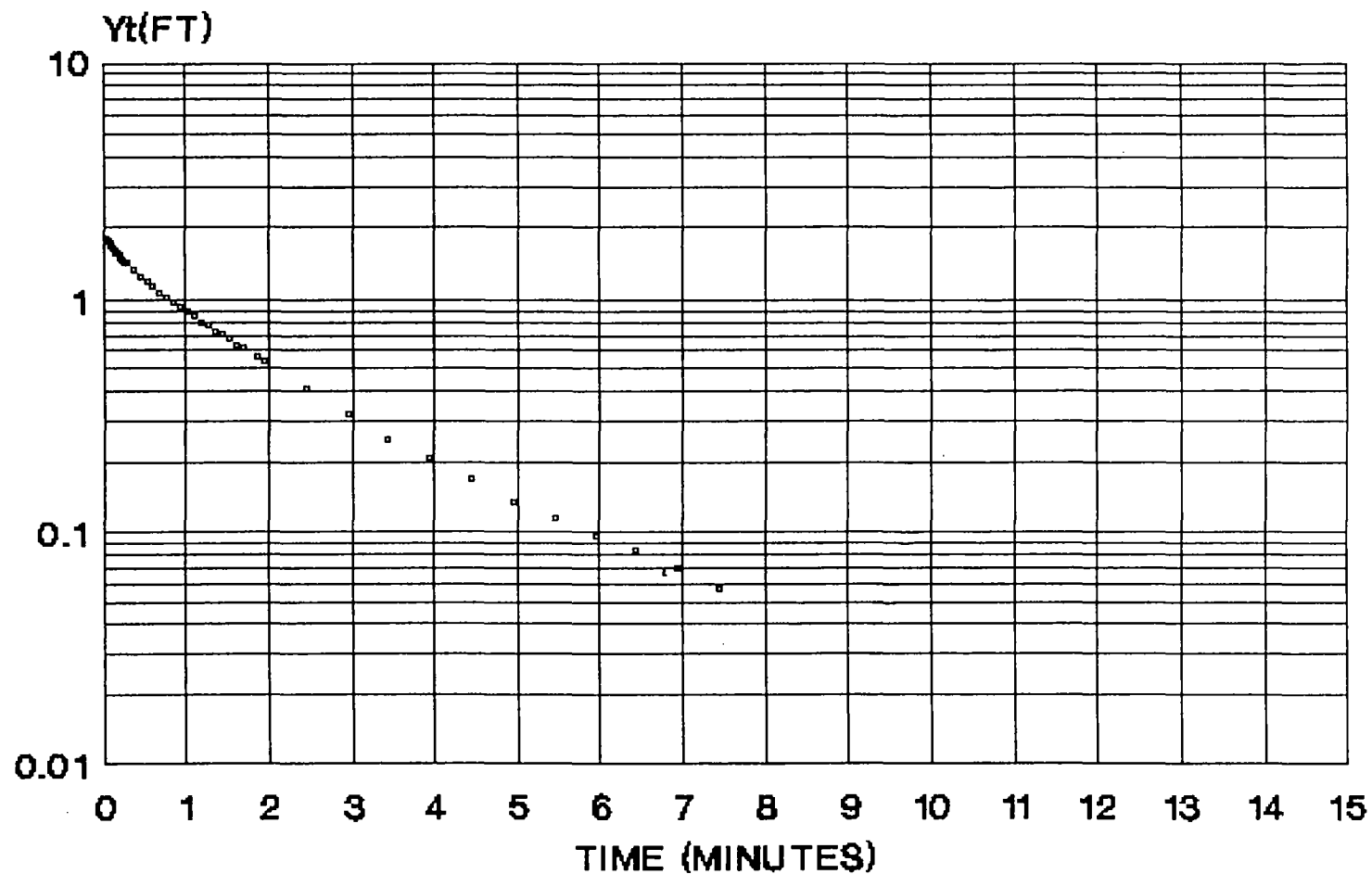
SLUG TEST FOR WELL SW104



MODIFIED BOUWER-RICE METHOD
DATE: 05 NOVEMBER 1990

MEDLEY FARMS GAFFNEY, SC

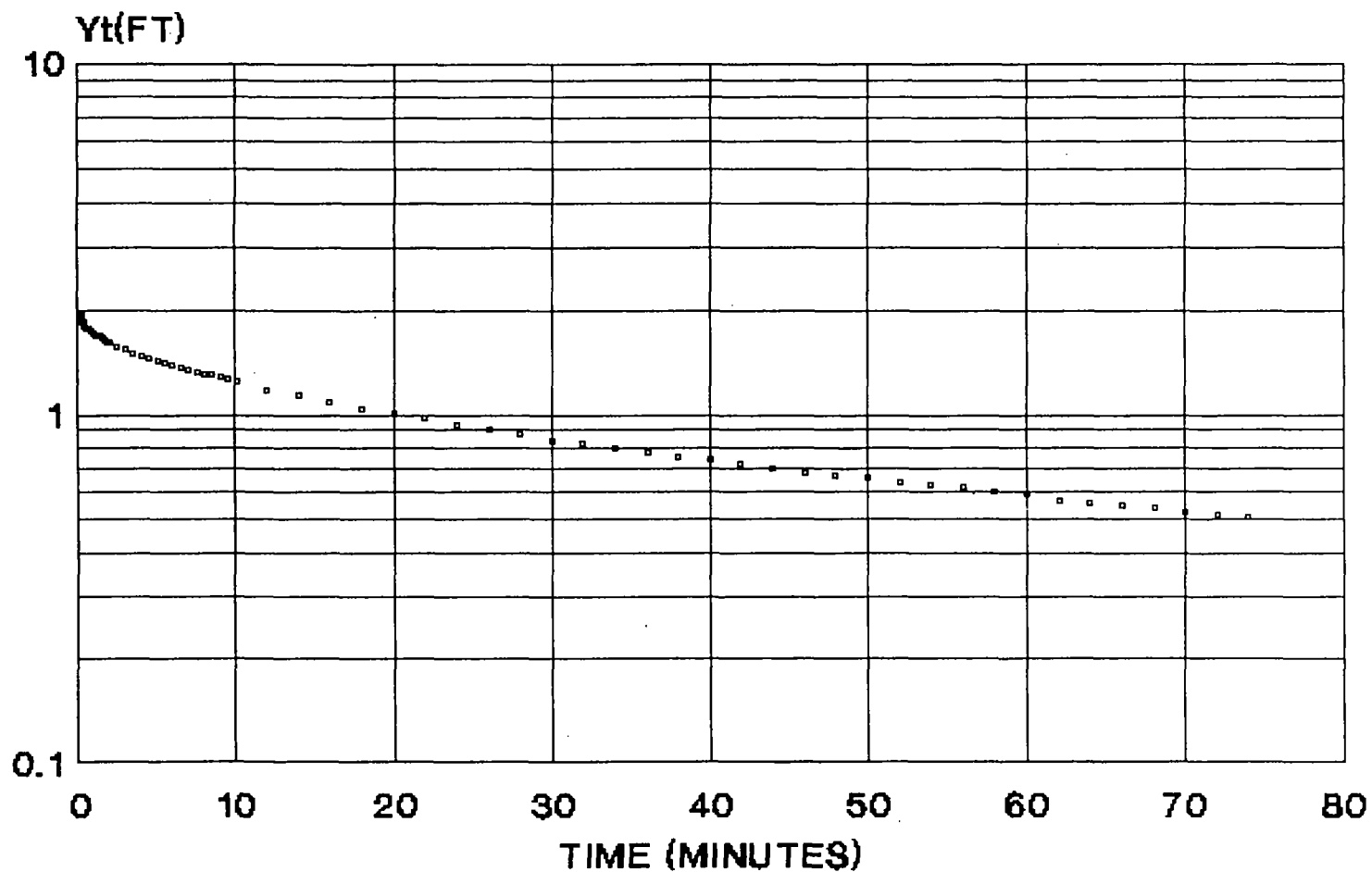
SLUG TEST FOR WELL SW106



MODIFIED BOUWER-RICE METHOD
DATE: 06 NOVEMBER 1990

MEDLEY FARMS GAFFNEY ,SC

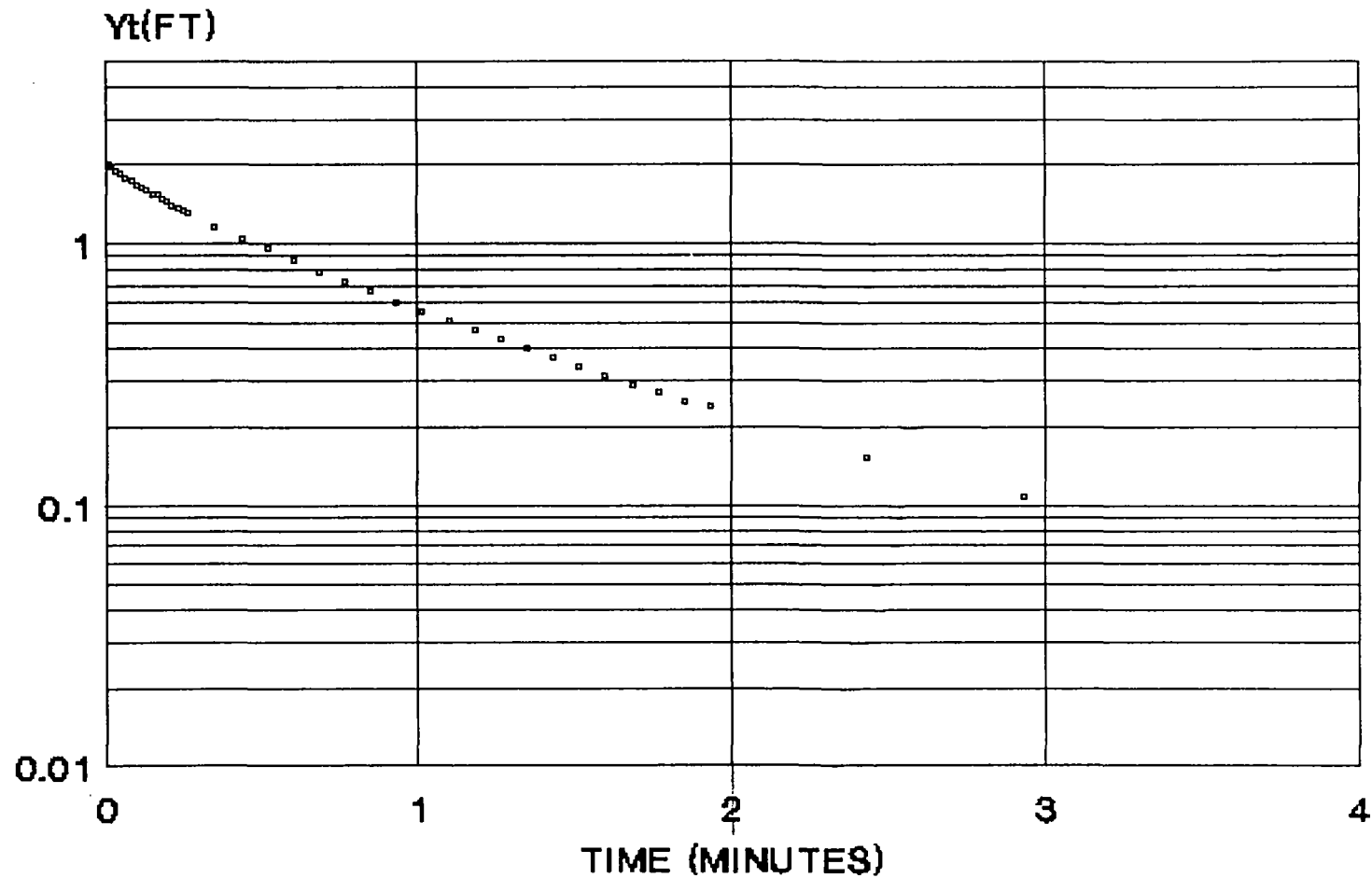
SLUG TEST FOR WELL SW108



MODIFIED BOUWER-RICE METHOD
DATE: 05 NOVEMBER 1990

MEDLEY FARMS GAFFNEY ,SC

SLUG TEST FOR WELL SW109



MODIFIED BOUWER-RICE METHOD
DATE: 05 NOVEMBER 1990

APPENDIX I
FIELD DATA INFORMATION LOGS
FOR GROUND-WATER SAMPLING

Field Data Information Log for Ground Water Sampling

Page 1 of 1

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date (yr/mo/day) 90/1/9
Field Personnel DETWILER/OVERBY
Site Name MEDLEY FARMS RI/FS - PHASE IB
SEC Job # G-8026
Well ID # SW-1
☒ Upgradient ☐ Downgradient
Weather Conditions CLEAR/MILD
Air Temperature 62° F °C
Total Well Depth (TWD) = 62 1/100 ft
Depth to Ground Water (DGW) = 51.32 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 10.68 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 1.74 gal
5 Casing Volumes = 8.7 gal = Standard Evacuation Volume
Method of Well Evacuation Teflon Bailer
Method of Sample Collection Teflon Bailer
Total Volume of Water Removed 2 gal

Casing Diameter 2.0 Inches
Casing Material Sch. 40 PVC & Stainless Steel
Measuring Point Elevation 690.47 1/100 ft
Height of Riser (above land surface) 1.81 1/100 ft
Land Surface Elevation 688.6 1/100 ft
Screened Interval 41.9 - 65.0 1/100 ft
Dedicated Pump or Bailer YES ☐ NO ☒ Type _____
Steel Guard Pipe Around Casing YES ☒ NO ☐
Locking Cap YES ☒ NO ☐
Protective Post/Abutment YES ☐ NO ☒
Well Integrity Satisfactory YES ☒ NO ☐
Well Yield LOW ☒ MODERATE ☐ HIGH ☐
Remarks Well bailed dry at 2 gallons

FIELD ANALYSES

VOLUME PURGED (gallons)	2.0						
TIME (military)	16:35						
pH (S.U.)	4.0						
Eh	-						
Sp. Cond. (µmhos/cm)	1110						
Water Temp. (°C)	14						
TURBIDITY (subjective) *	4						

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS: Well bailed dry at 2 gallons which is just a little over 1 borehole volume.



SIRRINE
ENVIRONMENTAL
CONSULTANTS

Page 1 of 1

Casing Diameter	2.0	Inches
Casing Material	Sch. 40 PVC and Stainless Steel Screen	
Measuring Point Elevation	690.47 TOC	1/100 ft
Height of Riser (above land surface)	2.40	1/100 ft
Land Surface Elevation	688.66	1/100 ft
Screened Interval	44.20-59.40	1/100 ft
Dedicated Pump or Bailer	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	Type _____
Steel Guard Pipe Around Casing	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	_____
Locking Cap	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	_____
Protective Post/Abutment	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	_____
Well Integrity Satisfactory	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	_____
Well Yield	LOW <input checked="" type="checkbox"/> MODERATE <input type="checkbox"/> HIGH <input type="checkbox"/>	_____
Remarks	_____ _____ _____ _____	

	FIELD ANALYSES						
VOLUME PURGED (gallons)	2	4	6	8	10	1600	
TIME (military)	1505	1530	1540	1555	1600	Sample	
pH (S.U.)	6.6	6.6	6.55	6.75	6.7	Taken	
Eh (mV)	--	--	--	--	--		
Sp. Cond. (µmhos/cm)	90	120	110	110	110		
Water Temp. (°C)	17	17	17	16	16		
TURBIDITY (subjective) *	> 100 NTU	> 100 NTU	> 100 NTU	> 100 NTU	> 100 NTU		

* (1) Clear (2) Slight (3) Moderate (4) High

fidInfo 10/87

Field Data Information Log for Ground Water Sampling

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Page 1 of 1

Date (yr/mo/day) 89/8/8

Field Personnel HUNT/DETWILER

Site Name MEDLEY FARMS RI/FS PHASE IA

SEC Job # G-8026

Well ID # SW-3

 Upgradient X Downgradient

Weather Conditions CLEAR

Air Temperature 70° F °C

Total Well Depth (TWD) = 77.0 1/100 ft

Depth to Ground Water (DGW) = 66.96 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 10.04 1/100 ft

1 Casing Volume (OCV) = LWC x .1632 = 1.63 gal

5 Casing Volumes = 8.15 gal = Standard Evacuation Volume

Method of Well Evacuation Teflon Baller

Method of Sample Collection Teflon Baller

Total Volume of Water Removed 5.1 gal

Casing Diameter 2.0 Inches

Casing Material Sch. 40 PVC and Stainless Steel Screen

Measuring Point Elevation 671.56 1/100 ft

Height of Riser (above land surface) 2.0 1/100 ft

Land Surface Elevation 669.90 1/100 ft

Screened Interval 61.8 to 77.0 1/100 ft

Dedicated Pump or Baller YES NO X Type

Steel Guard Pipe Around Casing YES X NO

Locking Cap YES X NO

Protective Post/Abutment YES NO

Well Integrity Satisfactory YES X NO

Well Yield LOW X MODERATE HIGH

Remarks

FIELD ANALYSES

VOLUME PURGED (gallons)	1.7	1.7	1.7				
TIME (military)	13:01	13:07	13:15				
pH (S.U.)	7.2	7.04	6.81				
Eh	-	-	-				
Sp. Cond. (µmhos/cm)	84	80	80				
Water Temp. (°C)	16.9	16.5	16.7				
TURBIDITY (subjective) *	4	4	4				

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS: BAILED DRY AT 3 VOLUMES. LET WELL RECOVER AND SAMPLED.

Field Data Information Log for Ground Water Sampling

Page 1 of 1

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date (yr/mo/day) 90/1/9
Field Personnel DETWILER/OVERBY
Site Name MEDLEY FARMS R/ES - PHASE IB
SEC Job # G-8026
Well ID # SW-3
 Upgradient X Downgradient
Weather Conditions CLEAR
Air Temperature 55° F °C
Total Well Depth (TWD) = 77.0 1/100 ft
Depth to Ground Water (DGW) = 68.43 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 8.57 1/100 ft
1 Casing Volume (OCV) = LWC x .163 = 1.39 gal
5 Casing Volumes = 6.98 gal = Standard Evacuation Volume
Method of Well Evacuation Teflon Bailer
Method of Sample Collection Teflon Bailer
Total Volume of Water Removed 5.5 gal

Casing Diameter 2.0 Inches
Casing Material Sch. 40 PVC & Stainless Steel
Measuring Point Elevation 671.56 1/100 ft
Height of Riser (above land surface) 1.66 1/100 ft
Land Surface Elevation 669.90 1/100 ft
Screened Interval 60.1 - 79.0 1/100 ft
Dedicated Pump or Bailer YES NO X Type
Steel Guard Pipe Around Casing YES X NO
Locking Cap YES X NO
Protective Post/Abutment YES NO X
Well Integrity Satisfactory YES X NO
Well Yield LOW X MODERATE HIGH
Remarks Well bailed dry at 5.5 gallons

FIELD ANALYSES

VOLUME PURGED (gallons)	5.5						
TIME (military)	15:40						
pH (S.U.)	5.0						
Eh	-						
Sp. Cond. (µmhos/cm)	1200						
Water Temp. (°C)	14						
TURBIDITY (subjective) *	2						

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS:

Field Data Information Log for Ground Water Sampling



P.O. Box 24000
Greenville, SC 29616

Page 1 of 1

Date (yr/mo/day) 90/9/25

Field Personnel D. Detwiler, S. Asquith

Site Name Medley Farms RI/FS - Phase II

SEC Job # G-8026

Well ID # SW3

 Upgradient X Downgradient

Weather Conditions Clear

Air Temperature 20 °C

Total Well Depth (TWD) = 79.08 TOC 1/100 ft

Depth to Ground Water (DGW) = 67.04 TPC 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 12.04 1/100 ft

1 Casing Volume (OCV) = LWC x 0.163 = 1.96 gal

5 Casing Volumes = 9.81 gal = Standard Evacuation Volume

Method of Well Evacuation Teflon Baller

Method of Sample Collection Teflon Baller

Total Volume of Water Removed 6 gal

Casing Diameter 2.0 Inches

Casing Material Sch. 40 PVC and Stainless Steel Screen

Measuring Point Elevation 671.56 TOC 1/100 ft

Height of Riser (above land surface) 2.08 1/100 ft

Land Surface Elevation 669.90 1/100 ft

Screened Interval 61.79-77.00 1/100 ft

Dedicated Pump or Baller YES NO X Type

Steel Guard Pipe Around Casing YES X NO

Locking Cap YES X NO

Protective Post/Abutment YES NO X

Well Integrity Satisfactory YES X NO

Well Yield LOW X MODERATE HIGH

Remarks

FIELD ANALYSES

VOLUME PURGED (gallons)	2	4	6				
TIME (military)	14:50	14:56	15:05				
pH (S.U.)	5.80	5.81	5.93				
Eh (mV)	--	--	--				
Sp. Cond. (µmhos/cm)	74	74	74				
Water Temp. (°C)	12.8	12.8	12.9				
TURBIDITY (subjective) *	2	2	3				

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS: 1st turbidity >100; 2nd turbidity >100; 3rd turbidity >100

Well bailed dry at 6 gallons; sampled after sufficient amount had recovered.

Field Data Information Log for Ground Water Sampling

Page 1 of 1

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date (yr/mo/day) 89/8/8
Field Personnel HUNT/DETWILER
Site Name MEDLEY FARMS RI/FS PHASE IA
SEC Job # G-8026
Well ID # SW-4
 Upgradient X Downgradient
Weather Conditions CLEAR
Air Temperature 70° F °C
Total Well Depth (TWD) = 68.3 1/100 ft
Depth to Ground Water (DGW) = 57.56 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 10.74 1/100 ft
1 Casing Volume (OCV) = LWC x .1632 = 1.75 gal
5 Casing Volumes = 8.75 gal = Standard Evacuation Volume
Method of Well Evacuation Teflon Baller
Method of Sample Collection Teflon Baller
Total Volume of Water Removed 8.75 gal

Casing Diameter 2.0 Inches
Casing Material Sch. 40 PVC and Stainless Steel Screen
Measuring Point Elevation 671.39 1/100 ft
Height of Riser (above land surface) 3.2 1/100 ft
Land Surface Elevation 668.68 1/100 ft
Screened Interval 53.1 TO 68.3 1/100 ft
Dedicated Pump or Baller YES NO X Type
Steel Guard Pipe Around Casing YES X NO
Locking Cap YES X NO
Protective Post/Abutment YES NO
Well Integrity Satisfactory YES X NO
Well Yield LOW MODERATE X HIGH
Remarks

FIELD ANALYSES

VOLUME PURGED (gallons)	1.75	1.75	1.75	1.75	1.75		
TIME (military)	14:47	14:53	15:01	15:07	15:14		
pH (S.U.)	6.84	6.72	6.61	6.61	6.59		
Eh	-	-	-	-	-		
Sp. Cond. (µmhos/cm)	160	164	147	141	134		
Water Temp. (°C)	18.2	17.5	17.2	17.0	16.5		
TURBIDITY (subjective) *	4	4	4	4	4		

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS:

Field Data Information Log for Ground Water Sampling

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Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Date (yr/mo/day) 90/1/9
Field Personnel DETWILER/OVERBY
Site Name MEDLEY FARMS R/FS - PHASE IB
SEC Job # G-8026
Well ID # SW-4
 Upgradient X Downgradient
Weather Conditions OVERCAST
Air Temperature 45° F °C
Total Well Depth (TWD) = 68.3 1/100 ft
Depth to Ground Water (DGW) = 60.27 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 8.03 1/100 ft
1 Casing Volume (OCV) = LWC x .163 = 1.31 gal
5 Casing Volumes = 6.54 gal = Standard Evacuation Volume
Method of Well Evacuation Teflon Bailor
Method of Sample Collection Teflon Bailor
Total Volume of Water Removed 6.54 gal

Casing Diameter 2.0 inches
Casing Material Sch. 40 PVC & Stainless Steel
Measuring Point Elevation 671.39 1/100 ft
Height of Riser (above land surface) 2.71 1/100 ft
Land Surface Elevation 668.68 1/100 ft
Screened Interval 51.5 - 70.5 1/100 ft
Dedicated Pump or Bailor YES NO X Type
Steel Guard Pipe Around Casing YES X NO
Locking Cap YES X NO
Protective Post/Abutment YES NO X
Well Integrity Satisfactory YES X NO
Well Yield LOW X MODERATE HIGH
Remarks

FIELD ANALYSES

VOLUME PURGED (gallons)	5.24	6.54					
TIME (military)	12:22	12:35					
pH (S.U.)	6.24	6.24					
Eh							
Sp. Cond. (µmhos/cm)	425	130					
Water Temp. (°C)	13	13					
TURBIDITY (subjective) *	3	2					

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS:

Field Data Information Log for Ground Water Sampling



P.O. Box 24000
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Date (yr/mo/day) 90/9/25

Field Personnel D. Detwiler

Site Name Medley Farms RI/FS - Phase II

SEC Job # G-8026

Well ID # SW4

 Upgradient X Downgradient
Clear

Weather Conditions Clear

Air Temperature 20 °C

Total Well Depth (TWD) = 71.5 TOC 1/100 ft

Depth to Ground Water (DGW) = 56.92 TPC 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 14.58 1/100 ft

1 Casing Volume (OCV) = LWC x 0.163 = 2.38 gal

5 Casing Volumes = 11.88 gal = Standard Evacuation Volume

Method of Well Evacuation Teflon Baller

Method of Sample Collection Teflon Baller

Total Volume of Water Removed 12 gal

Casing Diameter 2.0 Inches

Casing Material Sch. 40 PVC and Stainless Steel Screen

Measuring Point Elevation 671.39 TOC 1/100 ft

Height of Riser (above land surface) 3.20 1/100 ft

Land Surface Elevation 668.68 1/100 ft

Screened Interval 53.10-68.30 1/100 ft

Dedicated Pump or Baller YES NO X Type

Steel Guard Pipe Around Casing YES X NO

Locking Cap YES X NO

Protective Post/Abutment YES NO X

Well Integrity Satisfactory YES X NO

Well Yield LOW X MODERATE HIGH

Remarks

FIELD ANALYSES

VOLUME PURGED (gallons)	2.5	5	7.5	10	12		
TIME (military)	13:05	13:15	13:35	13:42	13:50		
pH (S.U.)	5.65	5.80	5.67	5.68	5.65		
Eh (mV)	--	--	--	--	--		
Sp. Cond. (µmhos/cm)	229	116	100	95	89		
Water Temp. (°C)	--	--	14.0	13.8	13.8		
TURBIDITY (subjective) *	2	2	2	2	3		

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS: 1st turbidity >100; 2nd turbidity >100; 3rd turbidity >100; 4th turbidity >100; 5th turbidity >100

Field Data Information Log for Ground Water Sampling



P.O. Box 24000
Greenville, SC 29616

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Date (yr/mo/day) 90/9/6
Field Personnel R. Enright, R. Burdine
Site Name Medley Farms RI/FS - Phase II
SEC Job # G-8026
Well ID # SW101
 Upgradient X Downgradient
Weather Conditions Clear, Hot, Humid
Air Temperature 26.4 °C
Total Well Depth (TWD) = 36.85 TOC 1/100 ft
Depth to Ground Water (DGW) = 33.02 TOC 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 3.83 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 0.62 gal
5 Casing Volumes = 3.12 gal = Standard Evacuation Volume
Method of Well Evacuation Teflon Baller
Method of Sample Collection Teflon Baller
Total Volume of Water Removed 4.5 gal

Casing Diameter 2.0 inches
Casing Material Sch. 40 PVC and Stainless Steel Screen
Measuring Point Elevation 604.18 TOC 1/100 ft
Height of Riser (above land surface) 3.20 1/100 ft
Land Surface Elevation 601.15 1/100 ft
Screened Interval 23.85-33.85 1/100 ft
Dedicated Pump or Baller YES NO X Type
Steel Guard Pipe Around Casing YES X NO
Locking Cap YES X NO
Protective Post/Abutment YES NO X
Well Integrity Satisfactory YES X NO
Well Yield LOW X MODERATE HIGH
Remarks

FIELD ANALYSES

VOLUME PURGED (gallons)	2.5	3.0	3.5	4.0	4.5		
TIME (military)	1331	1337	1343	1348	1352		
pH (S.U.)	6.71	6.76	6.76	6.63	6.54		
Eh (mV)	--	--	--	--	--		
Sp. Cond. (µmhos/cm)	181.6	162.7	167.0	171.8	166.4		
Water Temp. (°C)	20.0	18.3	18	17.8	17.9		
TURBIDITY (subjective) *	2	2	2	2	2		

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS: Sampled well at 1355. Sample identification was SW101-1.

Field Data Information Log for Ground Water Sampling



P.O. Box 24000
Greenville, SC 29616

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Date (yr/mo/day) 90/9/26

Field Personnel D. Detwiler, S. Asquith

Site Name Medley Farms RI/FS - Phase II

SEC Job # G-8026

Well ID # SW101

 Upgradient X Downgradient
Clear

Weather Conditions Clear

Air Temperature 25 °C

Total Well Depth (TWD) = 37.05 TOC 1/100 ft

Depth to Ground Water (DGW) = 32.82 TOC 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 4.23 1/100 ft

1 Casing Volume (OCV) = LWC x .163 = .69 gal

5 Casing Volumes = 3.45 gal = Standard Evacuation Volume

Method of Well Evacuation Teflon Baller

Method of Sample Collection Teflon Baller

Total Volume of Water Removed 3.5 gal

Casing Diameter 2.0 inches

Casing Material Sch. 40 PVC and Stainless Steel Screen

Measuring Point Elevation 604.18 TOC 1/100 ft

Height of Riser (above land surface) 3.0 1/100 ft

Land Surface Elevation 601.15 1/100 ft

Screened Interval 23.85-33.85 1/100 ft

Dedicated Pump or Baller YES NO X Type

Steel Guard Pipe Around Casing YES X NO

Locking Cap YES X NO

Protective Post/Abutment YES NO X

Well Integrity Satisfactory YES X NO

Well Yield LOW X MODERATE HIGH

Remarks

FIELD ANALYSES

VOLUME PURGED (gallons)	.7	1.5	2.1	2.8	3.5		
TIME (military)	12:33	12:47	13:00	13:14	13:21		
pH (S.U.)	6.39	6.60	6.61	6.60	6.57		
Eh (mV)	--	--	--	--	--		
Sp. Cond. (µmhos/cm)	165	166	168	164	163		
Water Temp. (°C)	13.0	12.5	12.5	12.3	12.5		
TURBIDITY (subjective) *	4	4	3	2	2		

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS: 1st turbidity: 58; 2nd turbidity: >100; 3rd turbidity: >100; 4th turbidity: >100; 5th turbidity: >100

Field Data Information Log for Ground Water Sampling



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Date (yr/mo/day) 90/8/29
 Field Personnel S. Asquith
 Site Name Medley Farms RI/FS - Phase II
 SEC Job # G-8026
 Well ID # SW102
 _____ Upgradient ☒ Downgradient
 Weather Conditions Sunny, Hot, Humid
 Air Temperature 35 °C
 Total Well Depth (TWD) = 51.22 TOC 1/100 ft
 Depth to Ground Water (DGW) = 39.88 TOC 1/100 ft
 Length of Water Column (LWC) = TWD - DGW = 11.34 1/100 ft
 1 Casing Volume (OCV) = LWC x 0.163 = 1.85 gal
 5 Casing Volumes = 9.24 gal = Standard Evacuation Volume
 Method of Well Evacuation Teflon Baller
 Method of Sample Collection Teflon Baller
 Total Volume of Water Removed 9.5 gal

Casing Diameter 2.0 inches
 Casing Material Sch. 40 PVC and Stainless Steel Screen
 Measuring Point Elevation 620.07 TOC 1/100 ft
 Height of Riser (above land surface) 2.64 1/100 ft
 Land Surface Elevation 617.43 1/100 ft
 Screened Interval 33.58-48.58 1/100 ft
 Dedicated Pump or Baller YES ☐ NO ☒ Type _____
 Steel Guard Pipe Around Casing YES ☒ NO ☐
 Locking Cap YES ☒ NO ☐
 Protective Post/Abutment YES ☐ NO ☒
 Well Integrity Satisfactory YES ☒ NO ☐
 Well Yield LOW ☒ MODERATE ☐ HIGH ☐
 Remarks _____

FIELD ANALYSES

VOLUME PURGED (gallons)	1.0	2.0	4.0	6.0	8.0	9.2	
TIME (military)	14.12	14.18	14.28	14.35	14.42	14.51	
pH (S.U.)	6.57	6.65	6.70	6.79	6.80	6.81	
Eh (mV)	--	--	--	--	--	--	
Sp. Cond. (µmhos/cm)	-70*	-70*	-70*	-60*	-60*	-60*	
Water Temp. (°C)	19.0	18.0	18.0	18.0	18.0	18.0	
TURBIDITY (subjective) *	4	4	3	3	3	2 to 3	

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS: * Specific conductivity meter was malfunctioning; relied on pH, temperature, and turbidity.

Field Data Information Log for Ground Water Sampling



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Greenville, SC 29616

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Date (yr/mo/day) 90/9/26

Field Personnel D. Detwiler, S. Asquith

Site Name Medley Farms RI/FS - Phase II

SEC Job # G-8026

Well ID # SW102

☐ Upgradient ☒ Downgradient
Clear

Weather Conditions _____

Air Temperature 27 °C

Total Well Depth (TWD) = 51.12 TOC 1/100 ft

Depth to Ground Water (DGW) = 40.05 TOC 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 11.07 1/100 ft

1 Casing Volume (OCV) = LWC x .163 = 1.80 gal

5 Casing Volumes = 9.02 gal = Standard Evacuation Volume

Method of Well Evacuation Teflon Baller

Method of Sample Collection Teflon Baller

Total Volume of Water Removed 10 gal

Casing Diameter 2.0 Inches

Casing Material Sch. 40 PVC and Stainless Steel Screen

Measuring Point Elevation 620.07 TOC 1/100 ft

Height of Riser (above land surface) 2.64 1/100 ft

Land Surface Elevation 617.43 1/100 ft

Screened Interval 33.58-48.58 1/100 ft

Dedicated Pump or Baller YES ☐ NO ☒ Type _____

Steel Guard Pipe Around Casing YES ☒ NO ☐

Locking Cap YES ☒ NO ☐

Protective Post/Abutment YES ☐ NO ☒

Well Integrity Satisfactory YES ☒ NO ☐

Well Yield LOW ☐ MODERATE ☒ HIGH ☐

Remarks _____

FIELD ANALYSES

VOLUME PURGED (gallons)	2	4	6	8	10		
TIME (military)	15:55	16:00	16:05	16:11	16:15		
pH (S.U.)	6.43	6.55	6.50	6.53	6.58		
Eh (mV)	--	--	--	--	--		
Sp. Cond. (µmhos/cm)	161	163	160	167	164		
Water Temp. (°C)	13.0	13.5	13.0	13.0	13.0		
TURBIDITY (subjective) *	4	4	3	4	4		

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS: 1st turbidity: 27; 2nd turbidity: 10; 3rd turbidity: >100; 4th turbidity: 5; 5th turbidity: 35

Field Data Information Log for Ground Water Sampling



P.O. Box 24000
Greenville, SC 29616

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Date (yr/mo/day) 90/08/29
Field Personnel S. Asquith
Site Name Medley Farms RI/FS - Phase II
SEC Job # G-8026
Well ID # SW103
 Upgradient X Downgradient
Weather Conditions Sunny, Hot, Humid
Air Temperature 35 °C
Total Well Depth (TWD) = 47.28 TOC 1/100 ft
Depth to Ground Water (DGW) = 36.82 TOC 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 10.46 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 1.70 gal
5 Casing Volumes = 8.52 gal = Standard Evacuation Volume
Method of Well Evacuation Teflon Baller
Method of Sample Collection Teflon Baller
Total Volume of Water Removed 8.6 gal

Casing Diameter 2.0 Inches
Casing Material Sch. 40 PVC and Stainless Steel Screen
Measuring Point Elevation 635.68 TOC 1/100 ft
Height of Riser (above land surface) 2.28 1/100 ft
Land Surface Elevation 633.40 1/100 ft
Screened Interval 29.72-45.00 1/100 ft
Dedicated Pump or Baller YES NO X Type
Steel Guard Pipe Around Casing YES X NO
Locking Cap YES X NO
Protective Post/Abutment YES NO X
Well Integrity Satisfactory YES X NO
Well Yield LOW X MODERATE HIGH

Remarks

FIELD ANALYSES

VOLUME PURGED (gallons)	1.0	2.0	4.0	6.0	8.6		
TIME (millitary)	1132	1141	1152	12.02	1210		
pH (S.U.)	5.94	5.93	5.90	5.90	6.12		
Eh (mV)	--	--	--	--	--		
Sp. Cond. (µmhos/cm)	90*	10*	-20*	-20*	-10*		
Water Temp. (°C)	18.0	17.0	17.0	16.5	17.0		
TURBIDITY (subjective) *	4	4	3	3	2		

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS: * Specific conductivity meter was malfunctioning; relied on pH, temperature, and turbidity.

Field Data Information Log for Ground Water Sampling



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P.O. Box 24000
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Date (yr/mo/day) 90/9/27
Field Personnel G. Overby/S. Asquith
Site Name Medley Farms RI/FS - Phase II
SEC Job # G-8026
Well ID # SW103
 Upgradient ☒ Downgradient
Weather Conditions Sunny
Air Temperature 27 °C
Total Well Depth (TWD) = 47.43 TOC 1/100 ft
Depth to Ground Water (DGW) = 37.45 TPC 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 9.98 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 1.63 gal
5 Casing Volumes = 8.2 gal = Standard Evacuation Volume
Method of Well Evacuation Teflon Baller
Method of Sample Collection Teflon Baller
Total Volume of Water Removed 7 gal

Casing Diameter 2.0 inches
Casing Material Sch. 40 PVC and Stainless Steel Screen
Measuring Point Elevation 635.68 TOC 1/100 ft
Height of Riser (above land surface) 2.28 1/100 ft
Land Surface Elevation 633.40 1/100 ft
Screened Interval 29.72-45.00 1/100 ft
Dedicated Pump or Baller YES NO ☒ Type
Steel Guard Pipe Around Casing YES ☒ NO
Locking Cap YES ☒ NO
Protective Post/Abutment YES NO ☒
Well integrity Satisfactory YES ☒ NO
Well Yield LOW ☒ MODERATE HIGH
Remarks

FIELD ANALYSES

VOLUME PURGED (gallons)	2	4	6	8	Sample		
TIME (military)	13:15	13:20	13:25	13:30	Taken 1330		
pH (S.U.)	5.9	6.0	6.1	6.0			
Eh (mV)	--	--	--	--			
Sp. Cond. (µmhos/cm)	80	80	80	80			
Water Temp. (°C)	13	13	13	13			
TURBIDITY (subjective) *	4	4	3	2			

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS: 2 gal Turb = > 100 NTU; 4 gal Turb = > 100 NTU; 8 gal Turb = > 100 NTU

Field Data Information Log for Ground Water Sampling



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Greenville, SC 29616

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Date (yr/mo/day) 90/08/29
Field Personnel S. Asquith
Site Name Medley Farms RI/FS - Phase II
SEC Job # G-8026
Well ID # SW104
 Upgradient X Downgradient
Weather Conditions Sunny, Hot, Humid
Air Temperature 35 °C
Total Well Depth (TWD) = 37.39 TOC 1/100 ft
Depth to Ground Water (DGW) = 23.42 TOC 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 13.97 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 2.28 gal
5 Casing Volumes = 11.39 gal = Standard Evacuation Volume
Method of Well Evacuation Teflon Baller
Method of Sample Collection Teflon Baller
Total Volume of Water Removed 11.0 gal

Casing Diameter 2.0 inches
Casing Material Sch. 40 PVC and Stainless Steel Screen
Measuring Point Elevation 649.85 TOC 1/100 ft
Height of Riser (above land surface) 2.39 1/100 ft
Land Surface Elevation 647.46 1/100 ft
Screened Interval 19.80-35.00 1/100 ft
Dedicated Pump or Baller YES NO X Type
Steel Guard Pipe Around Casing YES X NO
Locking Cap YES X NO
Protective Post/Abutment YES NO X
Well Integrity Satisfactory YES X NO
Well Yield LOW X MODERATE HIGH
Remarks

FIELD ANALYSES

VOLUME PURGED (gallons)	1.0	2.0	4.0	6.0	8.0	10.6	
TIME (military)	1553	1559	1604	1609	1615	1622	
pH (S.U.)	6.21	6.40	6.68	6.72	6.81	6.43	
Eh (mV)	--	--	--	--	--	--	
Sp. Cond. (µmhos/cm)	-70*	-70*	-70*	-60*	-60*	-50*	
Water Temp. (°C)	18.0	16.5	15.5	16.0	16.0	16.0	
TURBIDITY (subjective) *	4	4	3	3	2	2	

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS: * Specific conductivity meter was malfunctioning; relied on pH, temperature, and turbidity.

Field Data Information Log for Ground Water Sampling



P.O. Box 24000
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Date (yr/mo/day): 90/9/27
 Field Personnel G. Overby/S. Asquith
 Site Name Medley Farms RI/FS - Phase II
 SEC Job # G-8026
 Well ID # SW104
 Upgradient X Downgradient
 Weather Conditions Sunny
 Air Temperature 21 °C
 Total Well Depth (TWD) = 36.49 TOC 1/100 ft
 Depth to Ground Water (DGW) = 24.04 TOC 1/100 ft
 Length of Water Column (LWC) = TWD - DGW = 12.45 1/100 ft
 1 Casing Volume (OCV) = LWC x 0.163 = 2.03 gal
 5 Casing Volumes = 10.15 gal = Standard Evacuation Volume
 Method of Well Evacuation Teflon Bailer
 Method of Sample Collection Teflon Bailer
 Total Volume of Water Removed 10.5 gal

Casing Diameter 2.0 Inches
 Casing Material Sch. 40 PVC and Stainless Steel Screen
 Measuring Point Elevation 649.85 TOC 1/100 ft
 Height of Riser (above land surface) 2.39 1/100 ft
 Land Surface Elevation 647.46 1/100 ft
 Screened Interval 19.80-35.00 1/100 ft
 Dedicated Pump or Bailer YES NO X Type
 Steel Guard Pipe Around Casing YES X NO
 Locking Cap YES X NO
 Protective Post/Abutment YES NO X
 Well Integrity Satisfactory YES X NO
 Well Yield LOW X MODERATE HIGH
 Remarks

FIELD ANALYSES

VOLUME PURGED (gallons)	2	4	6	8	10	Sample	
TIME (military)	10:25	10:30	10:35	10:40	10:45	Taken - 1045	
pH (S.U.)	5.8	6.2	6	5.9	6		
Eh (mV)	--	--	--	--	--		
Sp. Cond. (µmhos/cm)	350	150	150	145	145		
Water Temp. (°C)	13	12	12	12	12		
TURBIDITY (subjective) *	2	3	3	3	3		

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS: 2 gal. Turb = 87 NTU, 6 gal. Turb = > 100 NTU, 10 gal. Turb = > 100 NTU

Field Data Information Log for Ground Water Sampling



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Date (yr/mo/day) 90/09/19
 Field Personnel J. Gillespie
 Site Name Medley Farms RI/FS - Phase II
 SEC Job # G-8026
 Well ID # SW106
 _____ Upgradient ☒ Downgradient
 Weather Conditions Partly Cloudy & Warm
 Air Temperature 27 °C
 Total Well Depth (TWD) = 24.21 TOC 1/100 ft
 Depth to Ground Water (DGW) = 11.33 TOC 1/100 ft
 Length of Water Column (LWC) = TWD - DGW = 12.88 1/100 ft
 1 Casing Volume (OCV) = LWC x 0.163 = 2.10 gal
 5 Casing Volumes = 10.50 gal = Standard Evacuation Volume
 Method of Well Evacuation Teflon Baller
 Method of Sample Collection Teflon Baller
 Total Volume of Water Removed 13.5 gal

Casing Diameter 2.0 inches
 Casing Material Sch. 40 PVC and Stainless Steel Screen
 Measuring Point Elevation 596.12 TOC 1/100 ft
 Height of Riser (above land surface) 3.21 1/100 ft
 Land Surface Elevation 592.91 1/100 ft
 Screened Interval 5.82-21.00 1/100 ft
 Dedicated Pump or Baller YES ☐ NO ☒ Type _____
 Steel Guard Pipe Around Casing YES ☒ NO ☐
 Locking Cap YES ☒ NO ☐
 Protective Post/Abutment YES ☐ NO ☒
 Well Integrity Satisfactory YES ☒ NO ☐
 Well Yield LOW ☒ MODERATE ☐ HIGH ☐
 Remarks _____

FIELD ANALYSES

VOLUME PURGED (gallons)	2.0	4.0	6.0	8.0	10.0	12.0	13.5
TIME (military)	1529	1535	1540	1546	1552	1601	1606
pH (S.U.)	6.5	6.70	6.54	6.59	6.62	6.62	6.67
Eh (mV)	--	--	--	--	--	--	--
Sp. Cond. (µmhos/cm)	105.4	94.8	104	106.7	103.1	99.9	95.7
Water Temp. (°C)	14.0	14.0	14.0	14.0	14.0	13.5	13.5
TURBIDITY (subjective) *	3	3	3	3	2	2	2

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS: Sampled at 1613. Sample Identification is SW106-1.

Field Data Information Log for Ground Water Sampling



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Date (yr/mo/day) 90/9/27
 Field Personnel G. Overby/S. Asquith
 Site Name Medley Farms RI/FS - Phase II
 SEC Job # G-8026
 Well ID # SW106
 _____ Upgradient ☒ Downgradient
 Weather Conditions Clear, Mild
 Air Temperature 24 °C
 Total Well Depth (TWD) = 24.45 TOC 1/100 ft
 Depth to Ground Water (DGW) = 11.44 TPC 1/100 ft
 Length of Water Column (LWC) = TWD - DGW = 13.0 1/100 ft
 1 Casing Volume (OCV) = LWC x 0.163 = 2.1 gal
 5 Casing Volumes = 10.6 gal = Standard Evacuation Volume
 Method of Well Evacuation Teflon Bailer
 Method of Sample Collection Teflon Bailer
 Total Volume of Water Removed 10 gal

Casing Diameter 2.0 Inches
 Casing Material Sch. 40 PVC and Stainless Steel Screen
 Measuring Point Elevation 596.12 TOC 1/100 ft
 Height of Riser (above land surface) 3.21 1/100 ft
 Land Surface Elevation 592.91 1/100 ft
 Screened Interval 5.82-21.00 1/100 ft
 Dedicated Pump or Bailer YES ☐ NO ☒ Type _____
 Steel Guard Pipe Around Casing YES ☒ NO ☐
 Locking Cap YES ☒ NO ☐
 Protective Post/Abutment YES ☐ NO ☒
 Well Integrity Satisfactory YES ☒ NO ☐
 Well Yield LOW ☒ MODERATE ☐ HIGH ☐
 Remarks _____

FIELD ANALYSES

VOLUME PURGED (gallons)	2	4	6	8	10	Sample	
TIME (military)	15:40	15:45	15:50	15:55	16:00	Taken 16:00	
pH (S.U.)	6.2	6.3	6.3	6.3	6.3		
Eh (mV)	--	--	--	--	--		
Sp. Cond. (µmhos/cm)	98	100	100	101	100		
Water Temp. (°C)	14	13	13	13	13		
TURBIDITY (subjective) *	4	1	1	1	1		

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS: 2 gal. Turb = > 100 NTU; 4 gal. Turb = > 41 NTU; 6 gal. Turb = 22 NTU; 10 gal. Turb = 13 NTU

Field Data Information Log for Ground Water Sampling



P.O. Box 24000
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Date (yr/mo/day) 90/9/25

Field Personnel D. Detwiler, S. Asquith

Site Name Medley Farms RI/FS - Phase II

SEC Job # G-8026

Well ID # SW108

 Upgradient X Downgradient
Clear

Weather Conditions Clear

Air Temperature 20 °C

Total Well Depth (TWD) = 22.49 TOC 1/100 ft

Depth to Ground Water (DGW) = 7.73 TPC 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 14.76 1/100 ft

1 Casing Volume (OCV) = LWC x 0.163 = 2.41 gal

5 Casing Volumes = 12.05 gal = Standard Evacuation Volume

Method of Well Evacuation Teflon Bailor

Method of Sample Collection Teflon Bailor

Total Volume of Water Removed 2.5 gal

Casing Diameter 2.0 Inches

Casing Material Sch. 40 PVC and Stainless Steel Screen

Measuring Point Elevation 605.28 TOC 1/100 ft

Height of Riser (above land surface) 2.43 1/100 ft

Land Surface Elevation 602.85 1/100 ft

Screened Interval 4.13-19.19 1/100 ft

Dedicated Pump or Bailor YES NO X Type

Steel Guard Pipe Around Casing YES X NO

Locking Cap YES X NO

Protective Post/Abutment YES NO X

Well Integrity Satisfactory YES X NO

Well Yield LOW X MODERATE HIGH

Remarks

FIELD ANALYSES

VOLUME PURGED (gallons)	2.5					
TIME (military)	15:50					
pH (S.U.)	6.29					
Eh (mV)	--					
Sp. Cond. (µmhos/cm)	95					
Water Temp. (°C)	13.0					
TURBIDITY (subjective) *	4					

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS: 1st turbidity >100; Well bailed dry at 2.5 gallons; sampled after sufficient amount had recovered.



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Casing Diameter	2.0	Inches
Casing Material	Sch. 40 PVC and Stainless Steel Screen	
Measuring Point Elevation	661.26 TOC	1/100 ft
Height of Riser (above land surface)	2.61	1/100 ft
Land Surface Elevation	658.65	1/100 ft
Screened Interval	44.80-60.00	1/100 ft
Dedicated Pump or Bailer	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	Type <input type="checkbox"/>
Steel Guard Pipe Around Casing	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	<input type="checkbox"/>
Locking Cap	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	<input type="checkbox"/>
Protective Post/Abutment	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	<input type="checkbox"/>
Well Integrity Satisfactory	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	<input type="checkbox"/>
Well Yield	LOW <input type="checkbox"/> MODERATE <input type="checkbox"/> HIGH <input checked="" type="checkbox"/>	<input type="checkbox"/>
Remarks		

1.7	3.5	5.1	7.0	8.5		
10:25	10:30	10:35	10:40	10:45		
9.41	7.63	6.48	6.17	6.13		
--	--	--	--	--		
442	208	144	150	145		
15	14	14	14	14		
4	4	3	4	4		

COMMENTS/OBSERVATIONS: Turbiditymeter 1.7 gal. - >100, 3.5 gals: >100, 5.1 gal - >100, 7.0 gal. - >100, 8.5 gal.- >100

Field Data Information Log for Ground Water Sampling

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Sirrine Environmental Consultants
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Date (yr/mo/day) 90/1/10
Field Personnel DETWILER/OVERBY
Site Name MEDLEY FARMS R/ES - PHASE IB
SEC Job # G-8026
Well ID # BW-1
☒ Upgradient ☐ Downgradient
Weather Conditions CLEAR
Air Temperature 55° F °C
Total Well Depth (TWD) = 96.5 1/100 ft
Depth to Ground Water (DGW) = 50.38 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 46.12 1/100 ft
1 Casing Volume (OCV) = LWC x 0.653 = 30.12 gal
5 Casing Volumes = 150.60 gal = Standard Evacuation Volume
Method of Well Evacuation ISCO WELL PUMP
Method of Sample Collection Teflon Bailor
Total Volume of Water Removed 150 gal

Casing Diameter 4.0 Inches
Casing Material Sch. 40 PVC & Stainless Steel
Measuring Point Elevation 689.90 1/100 ft
Height of Riser (above land surface) 1.25 1/100 ft
Land Surface Elevation 688.65 1/100 ft
Screened Interval OPEN CORE HOLE (85.6 - 94.8) 1/100 ft
Dedicated Pump or Bailer YES ☐ NO ☒ Type _____
Steel Guard Pipe Around Casing YES ☒ NO ☐
Locking Cap YES ☒ NO ☐
Protective Post/Abutment YES ☐ NO ☒
Well Integrity Satisfactory YES ☒ NO ☐
Well Yield LOW ☐ MODERATE ☐ HIGH ☒
Remarks _____

FIELD ANALYSES

VOLUME PURGED (gallons)	30	60	90	120	150		
TIME (military)	14:50	15:10	16:02	16:31	17:13		
pH (S.U.)	7.2	7.2	7.8	7.2	7.2		
Eh	-	-	-	-	-		
Sp. Cond. (µmhos/cm)	150	125	240	243	430		
Water Temp. (°C)	15	15	15	15	15		
TURBIDITY (subjective) *	3	2	1	1	1		

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS: _____

Field Data Information Log for Ground Water Sampling



P.O. Box 24000
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Page 1 of 2

Date (yr/mo/day) 90/9/28

Field Personnel G. Overby/S. Asquith

Site Name Medley Farms RI/FS - Phase II

SEC Job # G-8026

Well ID # BW1

☒ Upgradient ☐ Downgradient

Weather Conditions Partly Cloudy

Air Temperature 26 °C

Total Well Depth (TWD) = 94.80 TOC 1/100 ft

Depth to Ground Water (DGW) = 49.36 TOC 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 45.44 1/100 ft

1 Casing Volume (OCV) = LWC x 0.652 = 29.6 gal

5 Casing Volumes = 148.2 gal = Standard Evacuation Volume

Method of Well Evacuation Isco Mod. 2600

Method of Sample Collection Isco Mod. 2600

Total Volume of Water Removed 150 gal

Casing Diameter 4.0 Inches

Casing Material Sch. 40 PVC and Stainless Steel

Measuring Point Elevation 689.90 TOC 1/100 ft

Height of Riser (above land surface) 1.50 1/100 ft

Land Surface Elevation 688.65 1/100 ft

Screened Interval 85.60-94.80 1/100 ft

Dedicated Pump or Bailer YES ☐ NO ☒ Type

Steel Guard Pipe Around Casing YES ☒ NO ☐

Locking Cap YES ☒ NO ☐

Protective Post/Abutment YES ☐ NO ☒

Well Integrity Satisfactory YES ☒ NO ☐

Well Yield LOW ☐ MODERATE ☒ HIGH ☐

Remarks * Recalibrate Instruments.

FIELD ANALYSES

VOLUME PURGED (gallons)	30	50	60	70	80	95	100
TIME (military)	14:15	15:20	15:30	15:40	16:05	16:27	16:40
pH (S.U.)	6.86	*9.2	9.2	8.2	7.1	6.94	7.0
Eh (mV)	--	--	--	--	--	--	--
Sp. Cond. (µmhos/cm)	117	157	154	136	139	109	110
Water Temp. (°C)	15.0	14	14	14	14	14	14
TURBIDITY (subjective) *	1	1	1	1	1	1	1

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS: 1 st Turb: 18, 50 gal Turb: 26 NTU, 60 gal. Turb: 22 NTU, 80 gal Turb: 15 NTU, 95 gal Turb: 10, 110 gal Turb: = 15 NTU

Field Data Information Log for Ground Water Sampling



P.O. Box 24000
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Date (yr/mo/day) 90/9/28

Field Personnel G. Overby/S. Asquith

Site Name Medley Farms RI/FS - Phase II

SEC Job # G-8026

Well ID # BW1

☒ Upgradient ☐ Downgradient

Weather Conditions Partly Cloudy

Air Temperature 26 °C

Total Well Depth (TWD) = 94.80 TOC 1/100 ft

Depth to Ground Water (DGW) = 49.36 TOC 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 45.44 1/100 ft

1 Casing Volume (OCV) = LWC x 0.652 = 29.6 gal

5 Casing Volumes = 148.2 gal = Standard Evacuation Volume

Method of Well Evacuation Isco Mod. 2600

Method of Sample Collection Isco Mod. 2600

Total Volume of Water Removed 150 gal

Casing Diameter 4.0 Inches

Casing Material Sch. 40 PVC and Stainless Steel Riser

Measuring Point Elevation 689.90 TOC 1/100 ft

Height of Riser (above land surface) 1.50 1/100 ft

Land Surface Elevation 688.65 1/100 ft

Screened Interval 85.60-94.80 1/100 ft

Dedicated Pump or Bailer YES ☐ NO ☒ Type

Steel Guard Pipe Around Casing YES ☒ NO ☐

Locking Cap YES ☒ NO ☐

Protective Post/Abutment YES ☐ NO ☒

Well Integrity Satisfactory YES ☒ NO ☐

Well Yield LOW ☐ MODERATE ☒ HIGH ☐

Remarks * Recalibrate Instruments

FIELD ANALYSES

VOLUME PURGED (gallons)	110						
TIME (military)	16:50						
pH (S.U.)	7.0						
Eh (mV)	--						
Sp. Cond. (µmhos/cm)	110						
Water Temp. (°C)	14						
TURBIDITY (subjective) *	1						

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS: 1 st Turb: 18, 50 gal Turb: 26 NTU, 60 gal. Turb: 22 NTU, 80 gal Turb: 15 NTU, 95 gal Turb: 10, 110 gal Turb: = 15 NTU

Field Data Information Log for Ground Water Sampling

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Date (yr/mo/day) 89/8/9
Field Personnel DETWILER/GILLESPIE
Site Name MEDLEY FARMS RI/FS PHASE IA
SEC Job # G-8026
Well ID # BW-2
 Upgradient X Downgradient
Weather Conditions CLEAR
Air Temperature 65° F °C
Total Well Depth (TWD) = 85.0 1/100 ft
Depth to Ground Water (DGW) = 66.75 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 18.25 1/100 ft
1 Casing Volume (OCV) = LWC x 0.6528 = 11.91 gal
5 Casing Volumes = 59.57 gal = Standard Evacuation Volume
Method of Well Evacuation ISCO WELL PUMP
Method of Sample Collection Teflon Baller
Total Volume of Water Removed 60 gal

Casing Diameter 4.0 Inches
Casing Material Sch. 40 PVC & Stainless Steel
Measuring Point Elevation 662.99 1/100 ft
Height of Riser (above land surface) 1.92 1/100 ft
Land Surface Elevation 661.26 1/100 ft
Screened Interval OPEN CORE HOLE (64.4 TO 85.0) 1/100 ft
Dedicated Pump or Baller YES NO X Type
Steel Guard Pipe Around Casing YES X NO
Locking Cap YES X NO
Protective Post/Abutment YES NO
Well Integrity Satisfactory YES X NO
Well Yield LOW MODERATE X HIGH
Remarks

FIELD ANALYSES

VOLUME PURGED (gallons)

TIME (military)

pH (S.U.)

Eh

Sp. Cond. (µmhos/cm)

Water Temp. (°C)

TURBIDITY (subjective) *

12	24	36	48	60		
11:03	11:15	11:26	11:53	12:16		
6.72	6.51	6.22	6.26	6.19		
-	-	-	-	-		
77	72	73	70	71		
18	17.8	17.7	17.7	17.4		
1	1	1	1	1		

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS:

Field Data Information Log for Ground Water Sampling

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Sirrine Environmental Consultants
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Greenville, SC 29616

Date (yr/mo/day) 90/1/10

Field Personnel DETWILER/OVERBY

Site Name MEDLEY FARMS RI/ES - PHASE IB

SEC Job # G-8026

Well ID # BW-2

 Upgradient X Downgradient

Weather Conditions CLEAR

Air Temperature 55° F °C

Total Well Depth (TWD) = 85.0 1/100 ft

Depth to Ground Water (DGW) = 66.66 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 18.34 1/100 ft

1 Casing Volume (OCV) = LWC x 0.653 = 11.97 gal

5 Casing Volumes = 59.00 gal = Standard Evacuation Volume

Method of Well Evacuation ISCO WELL PUMP

Method of Sample Collection Teflon Baller

Total Volume of Water Removed 60 gal

Casing Diameter 4.0 Inches

Casing Material Sch. 40 PVC & Stainless Steel

Measuring Point Elevation 662.99 1/100 ft

Height of Riser (above land surface) 1.73 1/100 ft

Land Surface Elevation 661.26 1/100 ft

Screened Interval OPEN CORE HOLE (64.36 - 85.0) 1/100 ft

Dedicated Pump or Bailer YES NO X Type

Steel Guard Pipe Around Casing YES X NO

Locking Cap YES X NO

Protective Post/Abutment YES NO X

Well Integrity Satisfactory YES X NO

Well Yield LOW MODERATE HIGH X

Remarks

FIELD ANALYSES

VOLUME PURGED (gallons)	60						
TIME (military)	17:26						
pH (S.U.)	5.9						
Eh	-						
Sp. Cond. (µmhos/cm)	170						
Water Temp. (°C)	14						
TURBIDITY (subjective) *	1						

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS:

Field Data Information Log for Ground Water Sampling



P.O. Box 24000
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Date (yr/mo/day) 90/9/28
 Field Personnel G. Overby/S. Asquith
 Site Name Medley Farms RI/FS - Phase II
 SEC Job # G-8026
 Well ID # BW2
 _____ Upgradient ☒ Downgradient
 Weather Conditions Clear, Mild
 Air Temperature 24 °C
 Total Well Depth (TWD) = 85.00 TOC 1/100 ft
 Depth to Ground Water (DGW) = 66.15 TOC 1/100 ft
 Length of Water Column (LWC) = TWD - DGW = 18.85 1/100 ft
 1 Casing Volume (OCV) = LWC x 0.163 = 3.07 gal
 5 Casing Volumes = 15.4 gal = Standard Evacuation Volume
 Method of Well Evacuation Teflon Bailer
 Method of Sample Collection Teflon Bailer
 Total Volume of Water Removed 15 gal

Casing Diameter 2.0 inches
 Casing Material Sch. 40 PVC and Stainless Steel
 Measuring Point Elevation 662.99 TOC 1/100 ft
 Height of Riser (above land surface) 1.42 1/100 ft
 Land Surface Elevation 661.26 1/100 ft
 Screened Interval 64.36-85.00 1/100 ft
 Dedicated Pump or Bailer YES ☐ NO ☒ Type _____
 Steel Guard Pipe Around Casing YES ☒ NO ☐
 Locking Cap YES ☒ NO ☐
 Protective Post/Abutment YES ☐ NO ☒
 Well Integrity Satisfactory YES ☒ NO ☐
 Well Yield LOW ☐ MODERATE ☐ HIGH ☒
 Remarks Choose to use teflon bailer instead, of ISCO because of low water level.

FIELD ANALYSES

VOLUME PURGED (gallons)	3	6	9	12	15		
TIME (military)	11:15	11:20	11:43	11:51	12:04		
pH (S.U.)	6.2	6.16	6.24	6.28	6.29		
Eh (mV)	--	--	--	--	--		
Sp. Cond. (µmhos/cm)	100	103	88	87	86		
Water Temp. (°C)	14	13	13.8	13.5	13.5		
TURBIDITY (subjective) *	2	2	1	1	1		

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS: 3 gal Turb: >100 NTU, 6 gal Turb: >100 NTU, 9 gal. Turb: 93 NTU, 12 gal Turb: 88 NTU, 15 gal. Turb: 80.

Field Data Information Log for Ground Water Sampling

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Date (yr/mo/day) 90/1/11

Field Personnel DETWILER/OVERBY

Site Name MEDLEY FARMS R/FS - PHASE IB

SEC Job # G-8026

Well ID # BW-3

☐ Upgradient ☒ Downgradient

Weather Conditions CLEAR

Air Temperature 60° F °C

Total Well Depth (TWD) = 55 1/100 ft

Depth to Ground Water (DGW) = 6.17 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 48.83 1/100 ft

1 Casing Volume (OCV) = LWC x 0.653 = 31.86 gal

5 Casing Volumes = 159.43 gal = Standard Evacuation Volume

Method of Well Evacuation ISCO WELL PUMP

Method of Sample Collection Teflon Bailor

Total Volume of Water Removed 160 gal

Casing Diameter 4.0 Inches

Casing Material Sch. 40 PVC & Stainless Steel

Measuring Point Elevation 574.82 1/100 ft

Height of Riser (above land surface) 1.38 1/100 ft

Land Surface Elevation 573.44 1/100 ft

Screened Interval OPEN CORE HOLE (35.0 - 55.0) 1/100 ft

Dedicated Pump or Bailor YES ☐ NO ☒ Type _____

Steel Guard Pipe Around Casing YES ☒ NO ☐

Locking Cap YES ☒ NO ☐

Protective Post/Abutment YES ☐ NO ☒

Well Integrity Satisfactory YES ☒ NO ☐

Well Yield LOW ☐ MODERATE ☐ HIGH ☒

Remarks _____

FIELD ANALYSES

VOLUME PURGED (gallons)	128	160					
TIME (military)	13:47	14:33					
pH (S.U.)	7.3	7.5					
Eh	-	-					
Sp. Cond. (µmhos/cm)	138	145					
Water Temp. (°C)	16	16					
TURBIDITY (subjective) *	1	1					

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS: _____

Field Data Information Log for Ground Water Sampling



P.O. Box 24000
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Date (yr/mo/day) 90/9/28
Field Personnel D. Detwiler
Site Name Medley Farms RI/FS - Phase II
SEC Job # G-8026
Well ID # BW3
 Upgradient ☒ Downgradient
Weather Conditions Overcast
Air Temperature 21 °C
Total Well Depth (TWD) = 55.00 TOC 1/100 ft
Depth to Ground Water (DGW) = 7.12 TOC 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 47.88 1/100 ft
1 Casing Volume (OCV) = LWC x .653 = 31.26 gal
5 Casing Volumes = 156.33 gal = Standard Evacuation Volume
Method of Well Evacuation Isco Pump
Method of Sample Collection Isco Pump
Total Volume of Water Removed 157 gal

Casing Diameter 2.0 Inches
Casing Material Sch. 40 PVC and Stainless Steel Screen
Measuring Point Elevation 574.82 TOC 1/100 ft
Height of Riser (above land surface) 1.75 1/100 ft
Land Surface Elevation 573.44 1/100 ft
Screened Interval 35.50-55.0 1/100 ft
Dedicated Pump or Bailer YES NO ☒ Type
Steel Guard Pipe Around Casing YES ☒ NO
Locking Cap YES ☒ NO
Protective Post/Abutment YES NO ☒
Well Integrity Satisfactory YES ☒ NO
Well Yield LOW MODERATE HIGH ☒
Remarks

FIELD ANALYSES

VOLUME PURGED (gallons)	31	62	93	124	156.33		
TIME (military)	12:42	13:40	15:25	16:00	16:50		
pH (S.U.)	6.20	6.33	6.43	6.42	6.47		
Eh (mV)	--	--	--	--	--		
Sp. Cond. (µmhos/cm)	290	223	150	145	144		
Water Temp. (°C)	13.0	13.0	12.8	13.0	13.0		
TURBIDITY (subjective) *	1	1	1	1	1		

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS: 1st Turb: SW1 37 NTU, 2nd Turb: 22 NTU, 3rd Turb: 16 NTU, 4th Turb: 18 NTU, 5th Turb: 12 NTU

Field Data Information Log for Ground Water Sampling

Sirrine Environmental Consultants
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Greenville, SC 29616

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Date (yr/mo/day) 89/8/8

Field Personnel HUNT/DETWILER

Site Name MEDLEY FARMS RI/FS PHASE 1A

SEC Job # G-8026

Well ID # BW-4

 Upgradient X Downgradient

Weather Conditions OVERCAST, SLIGHT BREEZE

Air Temperature 75° F °C

Total Well Depth (TWD) = 31.0 1/100 ft

Depth to Ground Water (DGW) = 3.89 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 27.11 1/100 ft

1 Casing Volume (OCV) = LWC x .6528 = 17.70 gal

5 Casing Volumes = 88.48 gal = Standard Evacuation Volume

Method of Well Evacuation Teflon Baller

Method of Sample Collection Teflon Baller

Total Volume of Water Removed 90 gal

Casing Diameter 4.0 Inches

Casing Material Stainless Steel

Measuring Point Elevation 564.32 1/100 ft

Height of Riser (above land surface) 1.80 1/100 ft

Land Surface Elevation 562.65 1/100 ft

Screened Interval OPEN CORE HOLE (18.0 TO 31.0) 1/100 ft

Dedicated Pump or Baller YES NO X Type

Steel Guard Pipe Around Casing YES X NO

Locking Cap YES X NO

Protective Post/Abutment YES NO

Well Integrity Satisfactory YES X NO

Well Yield LOW MODERATE HIGH X

Remarks

FIELD ANALYSES

VOLUME PURGED (gallons)	18	18	18	18	18		
TIME (military)	08:45	08:57	09:10	09:27	09:40		
pH (S.U.)	6.44	7.03	7.10	7.22	7.19		
Eh	-	-	-	-	-		
Sp. Cond. (µmhos/cm)	267	117	118	239	242		
Water Temp. (°C)	15.0	14.7	14.7	14.9	14.9		
TURBIDITY (subjective) *	2	2	2	2	2		

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS:

Field Data Information Log for Ground Water Sampling

Sirrine Environmental Consultants
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Greenville, SC 29616

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Date (yr/mo/day) 90/1/9
Field Personnel DETWILER/OVERBY
Site Name MEDLEY FARMS RI/FS - PHASE IB
SEC Job # G-8026
Well ID # BW-4
 Upgradient X Downgradient
Weather Conditions CLEAR/MILD
Air Temperature 58° F °C
Total Well Depth (TWD) = 31 1/100 ft
Depth to Ground Water (DGW) = 4.86 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 26.14 1/100 ft
1 Casing Volume (OCV) = LWC x 0.653 = 17.06 gal
5 Casing Volumes = 85.3 gal = Standard Evacuation Volume
Method of Well Evacuation Teflon Baller
Method of Sample Collection Teflon Baller
Total Volume of Water Removed 86 gal

Casing Diameter 4.0 Inches
Casing Material Sch. 40 PVC & Stainless Steel
Measuring Point Elevation 564.32 1/100 ft
Height of Riser (above land surface) 1.67 1/100 ft
Land Surface Elevation 562.65 1/100 ft
Screened Interval OPEN CORE HOLE (18.0 - 31.0) 1/100 ft
Dedicated Pump or Baller YES NO X Type
Steel Guard Pipe Around Casing YES X NO
Locking Cap YES X NO
Protective Post/Abutment YES NO X
Well Integrity Satisfactory YES X NO
Well Yield LOW MODERATE HIGH X
Remarks

FIELD ANALYSES

VOLUME PURGED (gallons)	86						
TIME (military)	14:15						
pH (S.U.)	6.16						
Eh	-						
Sp. Cond. (µmhos/cm)	117						
Water Temp. (°C)	14						
TURBIDITY (subjective) *	2						

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS:

Field Data Information Log for Ground Water Sampling



P.O. Box 24000
Greenville, SC 29616

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Date (yr/mo/day) 90/9/26

Field Personnel D. Detwiler, S. Asquith

Site Name Medley Farms RI/FS - Phase II

SEC Job # G-8026

Well ID # BW4

 Upgradient X Downgradient
Clear

Weather Conditions Clear

Air Temperature 25 °C

Total Well Depth (TWD) = 31.0 TOC 1/100 ft

Depth to Ground Water (DGW) = 5.81 TOC 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 25.19 1/100 ft

1 Casing Volume (OCV) = LWC x .653 = 16.45 gal

5 Casing Volumes = 82.25 gal = Standard Evacuation Volume

Method of Well Evacuation Teflon Baller

Method of Sample Collection Teflon Baller

Total Volume of Water Removed 83 gal

Casing Diameter 4.0 inches

Casing Material Stainless Steel

Measuring Point Elevation 564.32 TOC 1/100 ft

Height of Riser (above land surface) 1.8 1/100 ft

Land Surface Elevation 562.65 1/100 ft

Screened Interval 18.0-31.0 1/100 ft

Dedicated Pump or Baller YES NO X Type

Steel Guard Pipe Around Casing YES X NO

Locking Cap YES X NO

Protective Post/Abutment YES NO X

Well Integrity Satisfactory YES X NO

Well Yield LOW MODERATE HIGH X

Remarks

FIELD ANALYSES

VOLUME PURGED (gallons)	16.5	33	50	66	83		
TIME (military)	10:05	10:15	10:27	10:36	10:46		
pH (S.U.)	6.97	7.06	7.07	6.99	7.05		
Eh (mV)	--	--	--	--	--		
Sp. Cond. (µmhos/cm)	258	255	248	251	250		
Water Temp. (°C)	12.0	12.0	12.0	12.0	12.0		
TURBIDITY (subjective) *	1	1	1	1	1		

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS: 1st turbidity: 80; 2nd turbidity: 35; 3rd turbidity: 35; 4th turbidity: 26; 5th turbidity: 31



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Casing Diameter	2.0	Inches
Casing Material	Sch. 40 PVC, Stainless Steel, Riser, and Screen	
Measuring Point Elevation	671.55 TOC	1/100 ft
Height of Riser (above land surface)	2.18	1/100 ft
Land Surface Elevation	669.37	1/100 ft
Screened Interval	90.60-110.80	1/100 ft
Dedicated Pump or Baller	YES <u>NO</u> <u>X</u>	Type <u> </u>
Steel Guard Pipe Around Casing	YES <u>X</u> <u>NO</u>	<u> </u>
Locking Cap	YES <u>X</u> <u>NO</u>	<u> </u>
Protective Post/Abutment	YES <u>NO</u> <u>X</u>	<u> </u>
Well Integrity Satisfactory	YES <u>X</u> <u>NO</u>	<u> </u>
Well Yield	LOW <u> </u> MODERATE <u>X</u> HIGH <u> </u>	
Remarks		

VOLUME PURGED (gallons)

TIME (military)

pH (S.U.)

Eh (mV)

Sp. Cond. ($\mu\text{mhos/cm}$)

Water Temp. (°C)

TURBIDITY (subjective) *

9	18	27	36	45		
10:00	10:20	10:50	11:30	12:00		
6.71	7.83	7.78	7.57	7.46		
--	--	--	--	--		
303	207	203	193	186		
15	14.5	15	15.5	16		
2	1	1	1	1		

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS: Turbidmeter 9 Gal: 45.5, 18 gal: 31, 27 gal: 19, 36 gal: 16, 45 gal: 14.5

Field Data Information Log for Ground Water Sampling



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Greenville, SC 29616

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Date (yr/mo/day) 90/09/19

Field Personnel R. Burdine

Site Name Medley Farms RI/FS - Phase II

SEC Job # G-8026

Well ID # BW105 (X-zone)

 Upgradient X Downgradient

Weather Conditions Sunny, Warm

Air Temperature 32 °C

Total Well Depth (TWD) = 139.00 1/100 ft

Depth to Ground Water (DGW) = N/A 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 90.00-102.70 1/100 ft

1 Casing Volume (OCV) = LWC x 0.67 = 8.40 gal

5 Casing Volumes = 41.00 gal = Standard Evacuation Volume

Method of Well Evacuation Isco Bladder Pump

Method of Sample Collection Isco Bladder Pump

Total Volume of Water Removed 45.0 gal

Casing Diameter 4.0 inches

Casing Material Sch. 40 PVC and Stainless Steel Riser

Measuring Point Elevation 671.55 (Ground Surface) 1/100 ft

Height of Riser (above land surface) NA 1/100 ft

Land Surface Elevation 671.55 1/100 ft

Screened Interval Open Core Hole 1/100 ft

Dedicated Pump or Baller YES NO X Type

Steel Guard Pipe Around Casing YES X NO

Locking Cap YES X NO

Protective Post/Abutment YES NO X

Well Integrity Satisfactory YES X NO

Well Yield LOW X MODERATE HIGH

Remarks

* Discrete Interval sampling with double packer assembly and Isco Bladder Pump

FIELD ANALYSES

VOLUME PURGED (gallons)	5	10	15	20	25	30	35
TIME (military)	0748	0758	0810	0826	0837	0852	0910
pH (S.U.)	9.57	9.78	9.79	9.81	9.80	9.75	9.69
Eh (mV)	--	--	--	--	--	--	--
Sp. Cond. (µmhos/cm)	179.5	172.7	168.3	172.3	169.5	170.5	159.0
Water Temp. (°C)	13	13	13	13	13	13	13
TURBIDITY (subjective) *	1	1	1	1	1	1	1

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS: Sampled X- zone at 0945. Sample Identification is BW105-1X.

Field Data Information Log for Ground Water Sampling



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Date (yr/mo/day) 90/09/19
Field Personnel R. Burdine
Site Name Medley Farms RI/FS - Phase II
SEC Job # G-8026
Well ID # BW105 (X-zone)
 Upgradient ☒ Downgradient
Weather Conditions Sunny, Warm
Air Temperature 32 °C
Total Well Depth (TWD) = 139.00 1/100 ft
Depth to Ground Water (DGW) = N/A 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 90.00-102.70 1/100 ft
1 Casing Volume (OCV) = LWC x 0.67 = 8.40 gal
5 Casing Volumes = 41.00 gal = Standard Evacuation Volume
Method of Well Evacuation Isco Bladder Pump
Method of Sample Collection Isco Bladder Pump
Total Volume of Water Removed 45.0 gal

Casing Diameter 4.0 Inches
Casing Material Sch. 40 PVC and Stainless Steel Riser
Measuring Point Elevation 671.55 (Ground Surface) 1/100 ft
Height of Riser (above land surface) NA 1/100 ft
Land Surface Elevation 671.55 1/100 ft
Screened Interval Open Core Hole 1/100 ft
Dedicated Pump or Bailer YES ☐ NO ☒ Type
Steel Guard Pipe Around Casing YES ☒ NO ☐
Locking Cap YES ☒ NO ☐
Protective Post/Abutment YES ☐ NO ☒
Well Integrity Satisfactory YES ☒ NO ☐
Well Yield LOW ☒ MODERATE ☐ HIGH ☐
Remarks * Discrete interval sampling with double packer assembly and Isco Bladder Pump

FIELD ANALYSES

VOLUME PURGED (gallons)	40	45				
TIME (military)	0928	0944				
pH (S.U.)	9.60	9.55				
Eh (mV)	--	--				
Sp. Cond. (µmhos/cm)	171.7	165.8				
Water Temp. (°C)	13	13				
TURBIDITY (subjective) *	1	1				

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS: Sampled X-zone at 0945. Sample identification is BW105-1X.

Field Data Information Log for Ground Water Sampling



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Date (yr/mo/day) 90/09/18
Field Personnel R. Burdine, J. Wylie
Site Name Medley Farms RI/FS - Phase II
SEC Job # G-8026
Well ID # BW105 (Y-zone)
 Upgradient X Downgradient
Weather Conditions Sunny
Air Temperature 23.3 °C
Total Well Depth (TWD) = 139.00 1/100 ft
Depth to Ground Water (DGW) = N/A 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 123.50-110.80 1/100 ft
1 Casing Volume (OCV) = LWC x 0.67 = 8.4 gal
5 Casing Volumes = 41.91 gal = Standard Evacuation Volume
Method of Well Evacuation Isco Bladder Pump
Method of Sample Collection Isco Bladder Pump
Total Volume of Water Removed 42.0 gal

Casing Diameter 4.0 Inches
Casing Material Sch. 40 PVC and Stainless Steel Riser
Measuring Point Elevation 671.55 (Ground Surface) 1/100 ft
Height of Riser (above land surface) NA 1/100 ft
Land Surface Elevation 671.55 1/100 ft
Screened Interval Open Core Hole 1/100 ft
Dedicated Pump or Bailer YES NO X Type
Steel Guard Pipe Around Casing YES X NO
Locking Cap YES X NO
Protective Post/Abutment YES NO X
Well Integrity Satisfactory YES X NO
Well Yield LOW X MODERATE HIGH
Remarks
* Discrete interval sampling with double packer assembly and Isco Bladder Pump

FIELD ANALYSES

VOLUME PURGED (gallons)	5	10	15	20	25	30	35
TIME (military)	1752	1805	1815	1828	1841	1858	1911
pH (S.U.)	9.0	7.9	8.49	8.71	8.78	8.40	8.42
Eh (mV)	--	--	--	--	--	--	--
Sp. Cond. (µmhos/cm)	184.3	170.3	157.4	179.4	169.4	177.3	169.2
Water Temp. (°C)	15	14.5	14.5	14.5	14.5	14.5	14.5
TURBIDITY (subjective) *	1	1	1	1	1	1	1

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS: Sampled Y-zone (123.5-110.8) at 1937. EPA indicates concern regarding air bubbles in sample line. Sample identification is BW105-1Y.

Field Data Information Log for Ground Water Sampling



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Date (yr/mo/day) 90/09/18
 Field Personnel R. Burdine, J. Wylie
 Site Name Medley Farms RI/FS - Phase II
 SEC Job # G-8026
 Well ID # BW105 (Y-zone)
 _____ Upgradient ☒ Downgradient
 Weather Conditions Sunny
 Air Temperature 23.3 °C
 Total Well Depth (TWD) = 139.00 1/100 ft
 Depth to Ground Water (DGW) = N/A 1/100 ft
 Length of Water Column (LWC) = TWD - DGW = 123.50-110.80 1/100 ft
 1 Casing Volume (OCV) = LWC x 0.67 = 8.4 gal
 5 Casing Volumes = 41.91 gal = Standard Evacuation Volume
 Method of Well Evacuation Isco Bladder Pump
 Method of Sample Collection Isco Bladder Pump
 Total Volume of Water Removed 42.0 gal

Casing Diameter 4.0 Inches
 Casing Material Sch. 40 PVC and Stainless Steel Riser
 Measuring Point Elevation 671.55 (Ground Surface) 1/100 ft
 Height of Riser (above land surface) NA 1/100 ft
 Land Surface Elevation 671.55 1/100 ft
 Screened Interval Open Core Hole 1/100 ft
 Dedicated Pump or Bailer YES ☐ NO ☒ Type _____
 Steel Guard Pipe Around Casing YES ☒ NO ☐
 Locking Cap YES ☒ NO ☐
 Protective Post/Abutment YES ☐ NO ☒
 Well Integrity Satisfactory YES ☒ NO ☐
 Well Yield LOW ☒ MODERATE ☐ HIGH ☐
 Remarks _____

* Discrete Interval sampling with double packer assembly and Isco Bladder Pump

FIELD ANALYSES

VOLUME PURGED (gallons)	41						
TIME (military)	1928						
pH (S.U.)	8.40						
Eh (mV)	--						
Sp. Cond. (µmhos/cm)	177.0						
Water Temp. (°C)	14.5						
TURBIDITY (subjective) *	1						

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS: _____

Field Data Information Log for Ground Water Sampling



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Date (yr/mo/day) 90/09/18

Field Personnel R. Burdine

Site Name Medley Farms RI/FS - Phase II

SEC Job # G-8026

Well ID # BW105 (Z-zone)

 Upgradient X Downgradient

Weather Conditions Sunny, Warm, Breezy

Air Temperature 32 °C

Total Well Depth (TWD) = 139.00 1/100 ft

Depth to Ground Water (DGW) = N/A 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 127.20-139.00 1/100 ft

1 Casing Volume (OCV) = LWC x 0.670 = 7.91 gal

5 Casing Volumes = 39.53 gal = Standard Evacuation Volume

Method of Well Evacuation Isco Bladder Pump

Method of Sample Collection Isco Bladder Pump

Total Volume of Water Removed 65 gal

Casing Diameter 4.0 inches

Casing Material Sch. 40 PVC and Stainless Steel Riser

Measuring Point Elevation 671.55 (Ground Surface) 1/100 ft

Height of Riser (above land surface) NA 1/100 ft

Land Surface Elevation 671.55 1/100 ft

Screened Interval Open Core Hole 1/100 ft

Dedicated Pump or Bailer YES NO X Type

Steel Guard Pipe Around Casing YES X NO

Locking Cap YES X NO

Protective Post/Abutment YES NO X

Well Integrity Satisfactory YES X NO

Well Yield LOW X MODERATE HIGH

Remarks

* Discrete Interval sampling with single packer assembly and Isco Bladder Pump.

FIELD ANALYSES

VOLUME PURGED (gallons)	5	10	15	20	25	30	35
TIME (military)	1414	1424	1434	1444	1454	1503	1512
pH (S.U.)	7.81	8.79	9.24	9.35	9.45	9.49	9.49
Eh (mV)	--	--	--	--	--	--	--
Sp. Cond. (µmhos/cm)	234	203	189	189.2	187.6	185.3	184.9
Water Temp. (°C)	19	18.8	15	15	15	15	15
TURBIDITY (subjective) *	2	2	2	2	2	2	2

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS: Sampled Z-zone (127.2-139.0) at 1628. Sample Identification is BW105-1Z.

Field Data Information Log for Ground Water Sampling



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Date (yr/mo/day) 90/09/18
 Field Personnel R. Burdine
 Site Name Medley Farms RI/FS - Phase II
 SEC Job # G-8026
 Well ID # BW105 (Z-zone)
 _____ Upgradient ☒ Downgradient
 Weather Conditions Sunny, Warm, Breezy
 Air Temperature 32 °C
 Total Well Depth (TWD) = 139.00 1/100 ft
 Depth to Ground Water (DGW) = N/A 1/100 ft
 Length of Water Column (LWC) = TWD - DGW = 127.20-139.00 1/100 ft
 1 Casing Volume (OCV) = LWC x 0.670 = 7.91 gal
 5 Casing Volumes = 39.53 gal = Standard Evacuation Volume
 Method of Well Evacuation Isco Bladder Pump
 Method of Sample Collection Isco Bladder Pump
 Total Volume of Water Removed 65 gal

Casing Diameter 4.0 Inches
 Casing Material Sch. 40 PVC and Stainless Steel Riser
 Measuring Point Elevation 671.55 (Ground Surface) 1/100 ft
 Height of Riser (above land surface) NA 1/100 ft
 Land Surface Elevation 671.55 1/100 ft
 Screened Interval Open Core Hole 1/100 ft
 Dedicated Pump or Bailer YES ☐ NO ☒ Type _____
 Steel Guard Pipe Around Casing YES ☒ NO ☐
 Locking Cap YES ☒ NO ☐
 Protective Post/Abutment YES ☐ NO ☒
 Well Integrity Satisfactory YES ☒ NO ☐
 Well Yield LOW ☒ MODERATE ☐ HIGH ☐
 Remarks _____
 * Discrete interval sampling with single packer assembly and Isco Bladder Pump.

FIELD ANALYSES

VOLUME PURGED (gallons)	40	45	50	55	60	65	
TIME (military)	1522	1532	1542	1551	1600	1610	
pH (S.U.)	9.5	9.45	9.45	9.43	9.36	9.32	
Eh (mV)	--	--	--	--	--	--	
Sp. Cond. (µmhos/cm)	177.8	182.5	180.6	177.8	180.2	182.9	
Water Temp. (°C)	15	15	15	15	15	15	
TURBIDITY (subjective) *	2	2	2	2	2	2	

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS: _____

Field Data Information Log for Ground Water Sampling



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Date (yr/mo/day) 90/9/28

Field Personnel G. Overby/S. Asquith

Site Name Medley Farms RI/FS - Phase II

SEC Job # G-8026

Well ID # BW106

 Upgradient X Downgradient

Weather Conditions Hazy with clouds

Air Temperature 16 °C

Total Well Depth (TWD) = 79.0 TOC 1/100 ft

Depth to Ground Water (DGW) = 50.0 TOC 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 29.0 1/100 ft

1 Casing Volume (OCV) = LWC x 0.163 = 51.1 gal

5 Casing Volumes = 258 gal = Standard Evacuation Volume

Method of Well Evacuation Submersible Pump/Isco 2600

Method of Sample Collection Isco Model 2600

Total Volume of Water Removed 258 gal

Casing Diameter 2.0 Inches

Casing Material Stainless Steel

Measuring Point Elevation 595.76 TOC 1/100 ft

Height of Riser (above land surface) 3.25 1/100 ft

Land Surface Elevation 592.51 1/100 ft

Screened Interval 58.77-80.60 1/100 ft

Dedicated Pump or Baller YES NO X Type

Steel Guard Pipe Around Casing YES X NO

Locking Cap YES X NO

Protective Post/Abutment YES NO X

Well Integrity Satisfactory YES X NO

Well Yield LOW X MODERATE HIGH

Remarks Sample submitted for non-CLP 24 hr. turnaround

FIELD ANALYSES

VOLUME PURGED (gallons)	51.1	102.2	127.7	153.2	178.7	204.2	222.0
TIME (military)	08:00	08:05	08:08	08:10	08:13	8:15	09:30
pH (S.U.)	7.0	7.0	7.0	7.0	6.9	6.9	6.7
Eh (mV)	--	--	--	--	--	--	--
Sp. Cond. (µmhos/cm)	173	137	133	133	131	133	139
Water Temp. (°C)	13.0	13.0	13.0	13.0	13.0	13.0	13
TURBIDITY (subjective) *	2	2	2	2	2	2	2

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS: 1st Turb > 100; 2nd Turb: 98; 3rd Turb: 95; 4th Turb: 92; 5th Turb: 95; 6th Turb: >100; 7th Turb: >100 NTU; 8th Turb: > 100
9th Turb: >100.

Field Data Information Log for Ground Water Sampling



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Date (yr/mo/day) 90/9/27

Field Personnel G. Overby/S. Asquith

Site Name Medley Farms RI/FS - Phase II

SEC Job # G-8026

Well ID # BW106

 Upgradient X Downgradient

Weather Conditions Hazy with clouds

Air Temperature 16 °C

Total Well Depth (TWD) = 79.0 TOC 1/100 ft

Depth to Ground Water (DGW) = 50.0 TOC 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 29.0 1/100 ft

1 Casing Volume (OCV) = LWC x 0.163 = 51.1 gal

5 Casing Volumes = 258 gal = Standard Evacuation Volume

Method of Well Evacuation Submersible Pump/Isco 2600

Method of Sample Collection Isco Model 2600

Total Volume of Water Removed 258 gal

Casing Diameter 2.0 inches

Casing Material Stainless Steel

Measuring Point Elevation 595.76 TOC 1/100 ft

Height of Riser (above land surface) 3.25 1/100 ft

Land Surface Elevation 592.51 1/100 ft

Screened Interval 58.77-80.60 1/100 ft

Dedicated Pump or Bailor YES NO X Type

Steel Guard Pipe Around Casing YES X NO

Locking Cap YES X NO

Protective Post/Abutment YES NO X

Well Integrity Satisfactory YES X NO

Well Yield LOW X MODERATE HIGH

Remarks Sample submitted for non-CLP 24 hr. turnaround

FIELD ANALYSES

VOLUME PURGED (gallons)	240.0	258				
TIME (military)	09:42	09:57				
pH (S.U.)	6.7	6.5				
Eh (mV)	--	--				
Sp. Cond. (µmhos/cm)	149	145				
Water Temp. (°C)	13	13				
TURBIDITY (subjective) *	2	2				

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS: 1st Turb > 100; 2nd Turb: 98; 3rd Turb: 95; 4th Turb: 92; 5th Turb: 95; 6th Turb: >100; 7th Turb: >100 NTU; 8th Turb: > 100
9th Turb: >100.

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Date (yr/mo/day) 90/10/2

Field Personnel D. Detwiler, S. Asquith

Site Name Medley Farms RI/FS - Phase II

SEC Job # G-8026

Well ID # BW108

 Upgradient X Downgradient
Clear

Weather Conditions Clear

Air Temperature 21 °C

Total Well Depth (TWD) = 93.80 TOC 1/100 ft

Depth to Ground Water (DGW) = 5.65 TPC 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 88.15 1/100 ft

1 Casing Volume (OCV) = LWC x .653 = 57.56 gal

5 Casing Volumes = 287.81 gal = Standard Evacuation Volume

Method of Well Evacuation ISCO Pump

Method of Sample Collection ISCO Pump

Total Volume of Water Removed 290 gal

Casing Diameter 4.0 Inches

Casing Material Stainless Steel

Measuring Point Elevation 605.64 TOC 1/100 ft

Height of Riser (above land surface) 2.49 1/100 ft

Land Surface Elevation 603.15 1/100 ft

Screened Interval 73.80-93.90 1/100 ft

Dedicated Pump or Bailer YES NO X Type

Steel Guard Pipe Around Casing YES X NO

Locking Cap YES X NO

Protective Post/Abutment YES NO X

Well Integrity Satisfactory YES X NO

Well Yield LOW MODERATE HIGH X

Remarks

FIELD ANALYSES

VOLUME PURGED (gallons)	57.5	115	172.5	230	287.5		
TIME (military)	11:05	12:37	13:35	15:17	16:20		
pH (S.U.)	9.40	8.94	8.83	8.82	11.20		
Eh (mV)	--	--	--	--	--		
Sp. Cond. (µmhos/cm)	184	175	178	173	397		
Water Temp. (°C)	13.8	13.5	13.5	13.5	13.5		
TURBIDITY (subjective) *	1	1	1	1	1		

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS: 1st Turb: 29 NTU, 2nd Turb: 17 NTU, 3rd Turb: 12 NTU, 4th Turb: 5.0 NTU, 5th Turb: 25 NTU



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Casing Diameter	4.0	inches
Casing Material	Sch. 40 PVC and Stainless Steel Riser	
Measuring Point Elevation	661.47 TOC	1/100 ft
Height of Riser (above land surface)	2.32	1/100 ft
Land Surface Elevation	659.15	1/100 ft
Screened Interval	68.50-90.00	1/100 ft
Dedicated Pump or Bailer	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	Type _____
Steel Guard Pipe Around Casing	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	
Locking Cap	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	
Protective Post/Abutment	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	
Well Integrity Satisfactory	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	
Well Yield	LOW <input type="checkbox"/> MODERATE <input type="checkbox"/> HIGH <input checked="" type="checkbox"/>	
Remarks	_____ _____ _____ _____	

VOLUME PURGED (gallons)	20	40	60	80	101		
TIME (military)	15:15	15:45	16:05	16:40	17:15		
pH (S.U.)	8.31	6.84	6.58	6.34	6.39		
Eh (mV)	--	--	--	--	--		
Sp. Cond. (µmhos/cm)	203	159	145	141	135		
Water Temp. (°C)	16	16	16	14.5	14.5		
TURBIDITY (subjective) *	1	1	1	1	1		

COMMENTS/OBSERVATIONS: Turbldmeter 20 gal: 14, 40 gal: 12, 60 gal: 6.3, 80 gal:4.5

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Date (yr/mo/day) 90/10/16
Field Personnel D. Detwiler
Site Name Medley Farms RI/FS - Phase II
SEC Job # G-8026
Well ID # BW110
 Upgradient X Downgradient
Weather Conditions Clear
Air Temperature 21 °C
Total Well Depth (TWD) = 85.00 TOC 1/100 ft
Depth to Ground Water (DGW) = 52.11 TPC 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 32.89 1/100 ft
1 Casing Volume (OCV) = LWC x .653 = 21.48 gal
5 Casing Volumes = 107.38 gal = Standard Evacuation Volume
Method of Well Evacuation Timco Isomega Pump
Method of Sample Collection Teflon Bailer
Total Volume of Water Removed 107.5 gal

Casing Diameter 4.0 inches
Casing Material Sch. 40 PVC and Stainless Steel Riser
Measuring Point Elevation 626.36 TOC 1/100 ft
Height of Riser (above land surface) 1.13 1/100 ft
Land Surface Elevation 625.23 1/100 ft
Screened Interval 64.10-84.50 1/100 ft
Dedicated Pump or Bailer YES NO X Type
Steel Guard Pipe Around Casing YES X NO
Locking Cap YES X NO
Protective Post/Abutment YES NO X
Well Integrity Satisfactory YES X NO
Well Yield LOW MODERATE HIGH X
Remarks Bladder of Timco Bailer failed. Bailed last 20 gallons using
teflon bailer and collected sample with teflon bailer.

FIELD ANALYSES

VOLUME PURGED (gallons)	21.5	43	64.5	86	107.5	15	
TIME (military)	11:25	14:50	15:25	15:55	16:20	11:10	
pH (S.U.)	11.28	9.22	9.10	8.88	8.79	10.8	
Eh (mV)	--	--	--	--	--	--	
Sp. Cond. (µmhos/cm)	432	251	279	271	260	366	
Water Temp. (°C)	14.5	14.5	14.5	14.5	14.5	15	
TURBIDITY (subjective) *	1	1	1	1.5	1	1	

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS: Turbidimeter 11 gal: 12, 21.5 gal: 11, 43 gal: 30, 64.5 gal: 25, 86 gal: 52, 107.5 gal: 37

Field Data Information Log for Ground Water Sampling

Sirrine Environmental Consultants
P.O. Box 24000
Greenville, SC 29616

Page 1 of 1

Date (yr/mo/day) 90/11/27
Field Personnel OVERBY
Site Name MEDLEY FARMS R/FS - PHASE II
SEC Job # G-8026
Well ID # BW1
X Upgradient Downgradient
Weather Conditions CLOUDY, WARM
Air Temperature 72° F °C
Total Well Depth (TWD) = 94.8 1/100 ft
Depth to Ground Water (DGW) = 50.6 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 44.2 1/100 ft
1 Casing Volume (OCV) = LWC x .652 = 29 gal
5 Casing Volumes = 145 gal = Standard Evacuation Volume
Method of Well Evacuation Teflon Bailer
Method of Sample Collection Teflon Bailer
Total Volume of Water Removed 125 gal

Casing Diameter 4.0 Inches
Casing Material Sch. 40 PVC & Stainless Steel
Measuring Point Elevation 689.90 1/100 ft
Height of Riser (above land surface) 1.5 1/100 ft
Land Surface Elevation 688.65 1/100 ft
Screened Interval 85.6-94.8 1/100 ft
Dedicated Pump or Bailer YES NO X Type
Steel Guard Pipe Around Casing YES X NO
Locking Cap YES X NO
Protective Post/Abutment YES NO X
Well Integrity Satisfactory YES X NO
Well Yield LOW MODERATE HIGH X
Remarks Tripod Used

FIELD ANALYSES

VOLUME PURGED (gallons)	30	60	90	125	Sample collected		
TIME (military)	15:10	15:40	16:00	16:25	at 16:30		
pH (S.U.)	9.2	6.6	6.7	6.7			
Eh	-	-	-	-			
Sp. Cond. (µmhos/cm)	140	124	123	125			
Water Temp. (°C)	15	15	15	15			
TURBIDITY (subjective) *	1	1	1	1			

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS: Samples collected were BW1-4 & BW1-4A

Field Data Information Log for Ground Water Sampling

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Page 1 of 1

Date (yr/mo/day) 90/11/27
Field Personnel OVERBY
Site Name MEDLEY FARMS R/V'S - PHASE II
SEC Job # G-8026
Well ID # SW1
X Upgradient Downgradient
Weather Conditions PARTLY CLOUDY
Air Temperature 72° F °C
Total Well Depth (TWD) = 59.4 1/100 ft
Depth to Ground Water (DGW) = 50.4 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 9.0 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 1.5 gal
5 Casing Volumes = 7.5 gal = Standard Evacuation Volume
Method of Well Evacuation Teflon Baller
Method of Sample Collection Teflon Baller
Total Volume of Water Removed 8 gal

Casing Diameter 2.0 Inches
Casing Material Sch. 40 PVC & Stainless Steel
Measuring Point Elevation 690.47 1/100 ft
Height of Riser (above land surface) 2.4 1/100 ft
Land Surface Elevation 688.66 1/100 ft
Screened Interval 44.2-59.4 1/100 ft
Dedicated Pump or Baller YES NO X Type
Steel Guard Pipe Around Casing YES X NO
Locking Cap YES X NO
Protective Post/Abutment YES NO X
Well Integrity Satisfactory YES X NO
Well Yield LOW MODERATE X HIGH
Remarks

FIELD ANALYSES

VOLUME PURGED (gallons)	2	3	5	8	Sample collected		
TIME (military)	13:55	14:00	14:05	14:10	at 14:15		
pH (S.U.)	6.1	5.8	5.9	5.9			
Eh	-	-	-	-			
Sp. Cond. (µmhos/cm)	85	64	68	64			
Water Temp. (°C)	16	15	15	15			
TURBIDITY (subjective) *	3	3	3	3			

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS: Samples collected were SW1-4, SW1-4A & SW1-4C

Field Data Information Log for Ground Water Sampling

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Page 1 of 1

Date (yr/mo/day) 90/11/26
Field Personnel OVERBY
Site Name MEDLEY FARMS RI/FS - PHASE II
SEC Job # G-8026
Well ID # SW106
 Upgradient X Downgradient
Weather Conditions CLEAR/MILD
Air Temperature 68° F °C
Total Well Depth (TWD) = 24.45 1/100 ft
Depth to Ground Water (DGW) = 11.5 1/100 ft
Length of Water Column (LWC) = TWD - DGW = 12.95 1/100 ft
1 Casing Volume (OCV) = LWC x 0.163 = 2.1 gal
5 Casing Volumes = 10.5 gal = Standard Evacuation Volume
Method of Well Evacuation Teflon Baller
Method of Sample Collection Teflon Baller
Total Volume of Water Removed 10 gal

Casing Diameter 2.0 Inches
Casing Material Sch. 40 PVC & Stainless Steel
Measuring Point Elevation 596.12 1/100 ft
Height of Riser (above land surface) 3.21 1/100 ft
Land Surface Elevation 592.91 1/100 ft
Screened Interval 5.82-21.00 1/100 ft
Dedicated Pump or Baller YES NO X Type
Steel Guard Pipe Around Casing YES X NO
Locking Cap YES X NO
Protective Post/Abutment YES NO X
Well Integrity Satisfactory YES X NO
Well Yield LOW MODERATE X HIGH
Remarks Well balled down between parameter measurements.

FIELD ANALYSES

VOLUME PURGED (gallons)	3.0	5.0	8.0	10.0	Sample collected		
TIME (military)	15:40	15:50	16:05	16:20	at 16:25		
pH (S.U.)	5.6	5.7	5.7	5.58			
Eh	--	--	--	--			
Sp. Cond. (µmhos/cm)	92	88	88	86			
Water Temp. (°C)	16	15	15	15			
TURBIDITY (subjective) *	4	4	4	4			

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS: Samples collected were SW106-4, SW106-4A.

Field Data Information Log for Ground Water Sampling

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Page 1 of 1

Date (yr/mo/day) 90/11/26

Field Personnel OVERBY

Site Name MEDLEY FARMS R/FS - PHASE II

SEC Job # G-8026

Well ID # BW4

 Upgradient X Downgradient

Weather Conditions CLEAR/WARM

Air Temperature 75° F °C

Total Well Depth (TWD) = 31.0 1/100 ft

Depth to Ground Water (DGW) = 6.55 1/100 ft

Length of Water Column (LWC) = TWD - DGW = 24.85 1/100 ft

1 Casing Volume (OCV) = LWC x 0.652 = 16.22 gal

5 Casing Volumes = 81.01 gal = Standard Evacuation Volume

Method of Well Evacuation Teflon Baller

Method of Sample Collection Teflon Baller

Total Volume of Water Removed 80 gal

Casing Diameter 4.0 inches

Casing Material Sch. 40 PVC & Stainless Steel

Measuring Point Elevation 564.32 1/100 ft

Height of Riser (above land surface) 1.8 1/100 ft

Land Surface Elevation 562.65 1/100 ft

Screened Interval 18.0-31.0 1/100 ft

Dedicated Pump or Bailer YES NO X Type

Steel Guard Pipe Around Casing YES X NO

Locking Cap YES X NO

Protective Post/Abutment YES NO X

Well Integrity Satisfactory YES X NO

Well Yield LOW MODERATE HIGH X

Remarks

FIELD ANALYSES

VOLUME PURGED (gallons)	16	50	65	80	Sample collected		
TIME (military)	14:20	14:35	14:50	14:55	at 15:00		
pH (S.U.)	6	6.4	6.4	6.3			
Eh	--	--	--	--			
Sp. Cond. (µmhos/cm)	323	240	221	230			
Water Temp. (°C)	16	15	15	15			
TURBIDITY (subjective) *	4	4	3	3			

* (1) Clear (2) Slight (3) Moderate (4) High

COMMENTS/OBSERVATIONS: Samples collected were BW4-4, BW4-4A, & BW4-4C

APPENDIX J
PHYSICAL SOIL ANALYSIS

Laboratory Test Procedures

GRAIN SIZE TESTS (ASTM D-422)

The soil specimen is prepared and tested to determine the percentages of particles within a range of sizes. The distribution of particles larger than 75 microns (retained on No. 200 sieve) is determined by sieving, while smaller particle sizes are measured by a sedimentation process with a hydrometer.

The soil specimen is prepared by drying with the material retained on No. 200 sieve passed through a series of nested sieves. The portion retained on each sieve is weighed, and the percent of the total sample retained on each sieve is computed and plotted on the attached Grain Size Distribution Sheets.

The fine grained soil distribution (silt and clay particles) is determined using the hydrometer. A dried soil specimen of 50 grams is placed in suspension using distilled water and dispersing agent. The density of the solution is measured with the hydrometer over selected time intervals, and the particle size and weights are computed. These values give a curve or distribution for various particle sizes of microscopic silt and clay size particles presented as an extension to the curves depicting the grain size distribution of the soil fraction coarser than the No. 200 sieve. These plots are attached on the Grain Size Distribution sheets.

MOISTURE CONTENT DETERMINATION (ASTM D-2216)

Each sample was weighed to 200 grams then placed in an oven set to about 140°F. The dried sample was removed from the oven and weighed. The moisture content was computed by dividing the weight of evaporated water by the weight of the dry sample. The results expressed as a percent, are presented on the attached Grain Size Distribution Data Sheets.

ATTERBERG LIMITS (ASTM D-4318)

Determined the soil's plasticity characteristics. The plasticity index (PI) is the range of moisture content over which the soil deformed as a plastic material. The liquid limit is the moisture content at which the soil becomes sufficiently "wet" to flow as a heavy viscous fluid. The plastic limit (PL) is the lowest moisture content at which the soil is sufficiently plastic to be manually rolled into 1 1/2" threads 1/8" in diameter. The results of these tests are presented on the attached Grain Size Distribution Data Sheets.

Laboratory Test Procedures

TOTAL ORGANIC CARBON ANALYZER (DC-80)

- Equivalent to ASTM D-2579-85

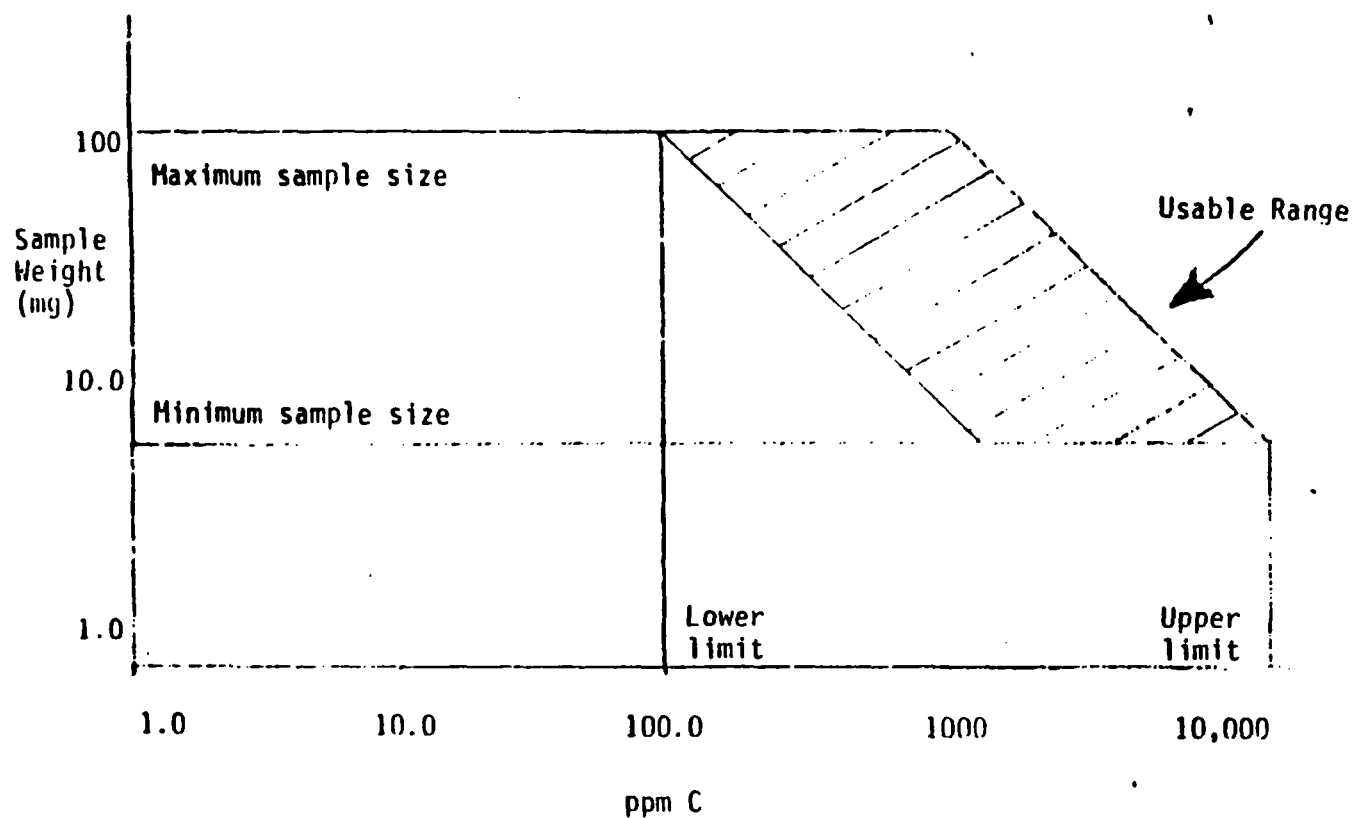
The high temperature DC-80 system operates on the concept of sparging, oxidation, and infrared detections, as does the low-temperature system. However, oxidation in this case is performed in a quartz combustion tube in oxygen atmosphere, at approximately 800°C. The combustion tube is placed in the PRG-1 Furnace Module. The high temperature method has one primary advantage: it oxidizes almost every substance likely to occur in a water sample. This makes this technique amenable to determination of sludges and sediments.

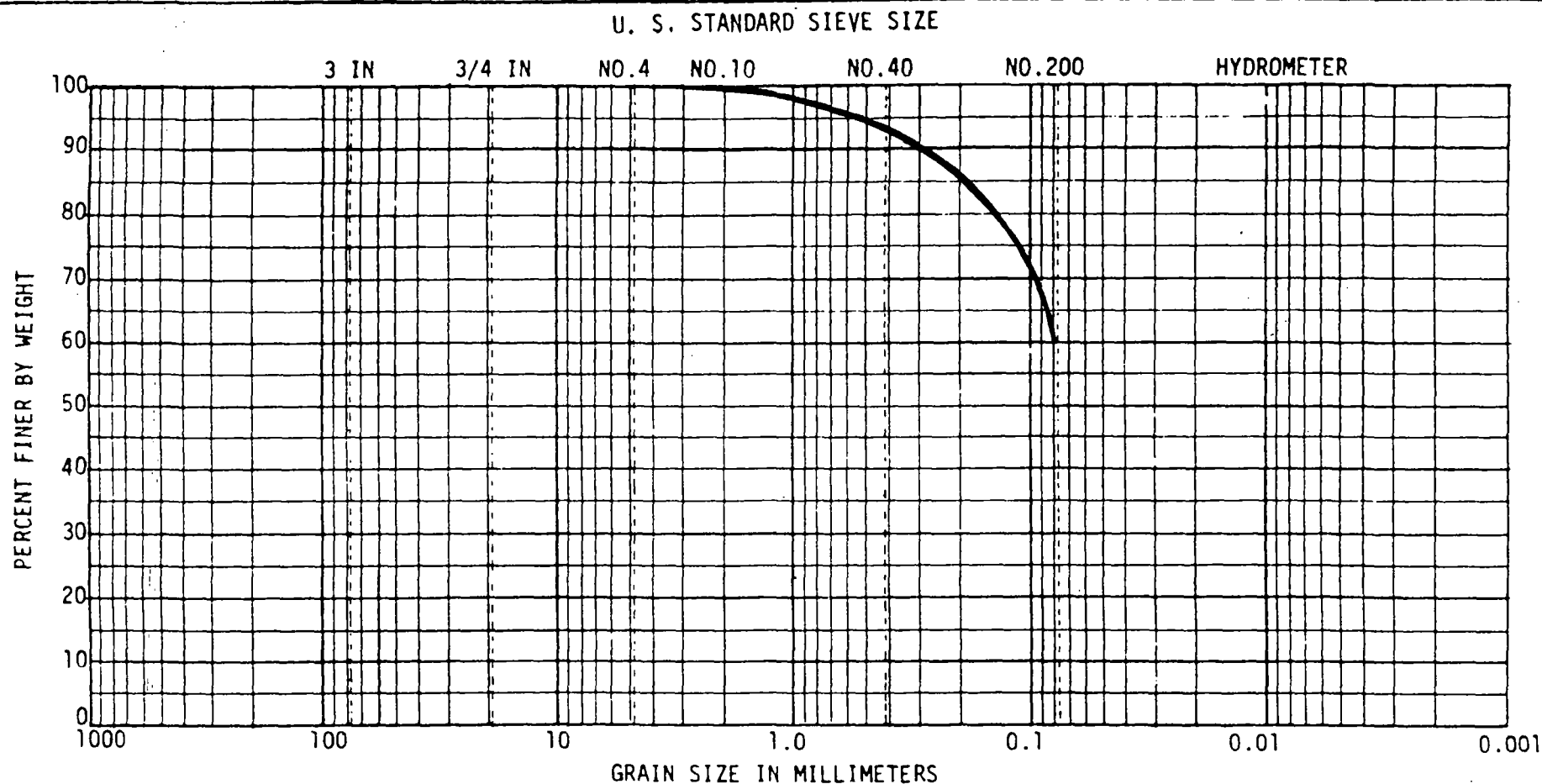
The high temperature system is operated with single-point calibration with results read in concentration units. Accuracy will depend upon accuracy of known standard calibration solutions.

Prior to installation, the rubber gasket on the inlet side of the PRG-1 should be removed. This gasket is only used to position the normal purgeable analysis combustion tube. The installation of the solid sampler is easy and straight forward, but the plumbing is slightly different from the PRG Module. Reference the Assembly Drawing, 880-654.

1. Referencing the Operating Kit (P/N 899-512) locate all necessary parts to complete the installation.
2. Place the PRG Module to the right side of the main DC-80 Reaction Module leaving about 12 inches in between. Make sure that power is off.
3. Pack 1 1/2 to 1 3/4 inch section from the dimple of the combustion tube (P/N 511-533) with the oxidation promoter (P/N 511-883) and hold in place with quartz wool.

Solid Sample Size vs Carbon Concentrations





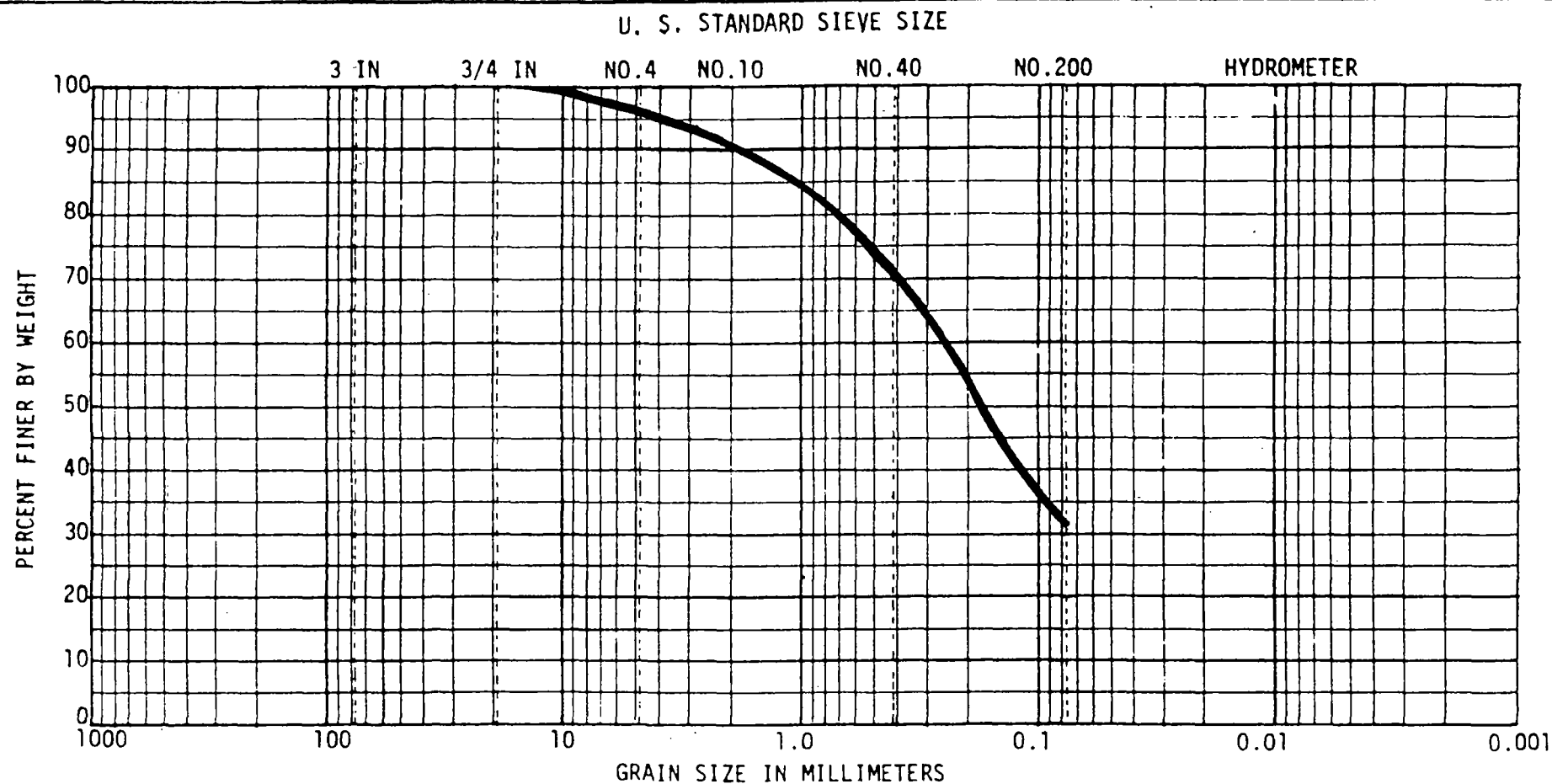
SAMPLE	DEPTH	CLASSIFICATION	NAT WC	LL	PL	PI
BW1	55-67FT	Tan Fine to Medium	14.5	30	22	8
S/11		Sandy SILT				
S/12						
S/13						
		0-5% Mica				

GRAIN SIZE DISTRIBUTION

Medley Farms

Gaffney, S.C.

Geo-Systems
Design & Testing, Inc.



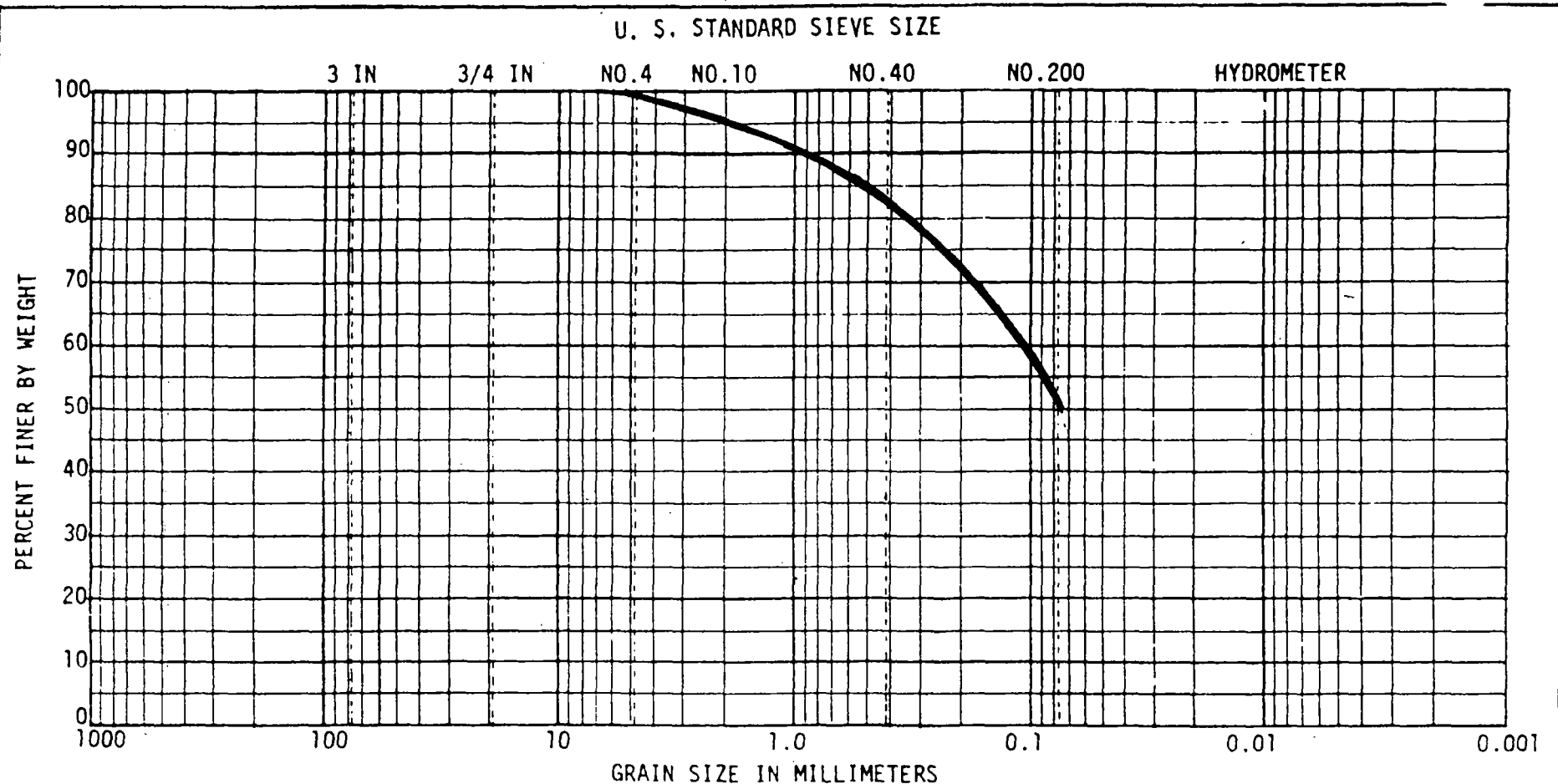
		GRAVEL		SAND			SILT OR CLAY
		Coarse	Fine	Coarse	Medium	Fine	
SAMPLE	DEPTH	CLASSIFICATION		NAT WC	LL	PL	PI
BW2	75-82Ft	Tan Silty Fine to		11.3			
S/15		Coarse SAND					
S/16							
		(SM-SP)					
		5-15% Mica					

GRAIN SIZE DISTRIBUTION

Medley Farms

Gaffney, S.C.

Geo-Systems
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COBBLES	GRAVEL		SAND			SILT OR CLAY
	Coarse	Fine	Coarse	Medium	Fine	

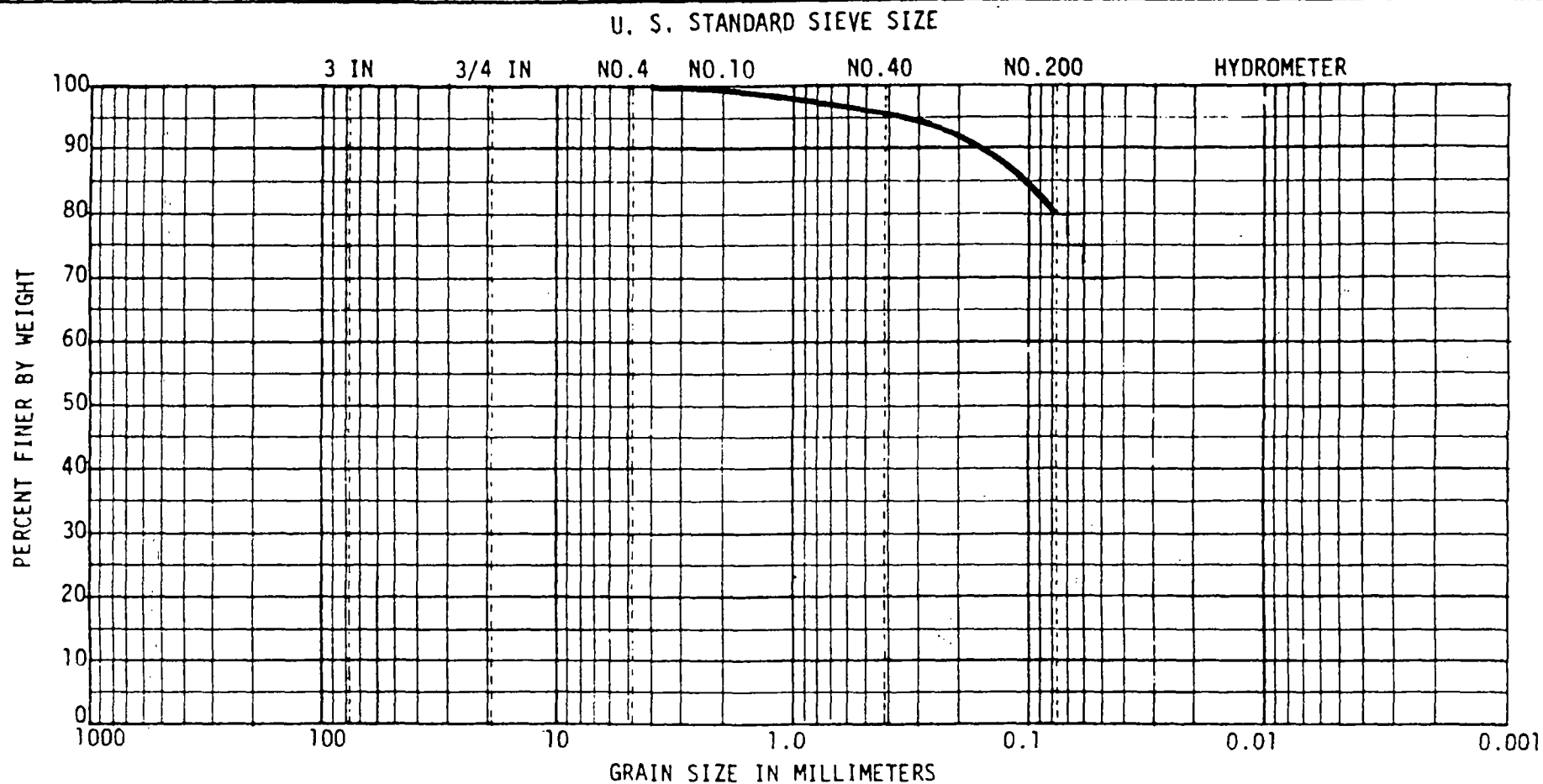
SAMPLE	DEPTH	CLASSIFICATION	NAT WC	LL	PL	PI
BW3	20-37Ft.	Brown Fine to Coarse	15.5	24	18	6
S/4		Sandy SILT				
S/5						
S/7		(ML)				
		15 - 30% Mica				

GRAIN SIZE DISTRIBUTION

Medley Farms

Gaffney, S.C.

Geo-Systems
Design & Testing, Inc.

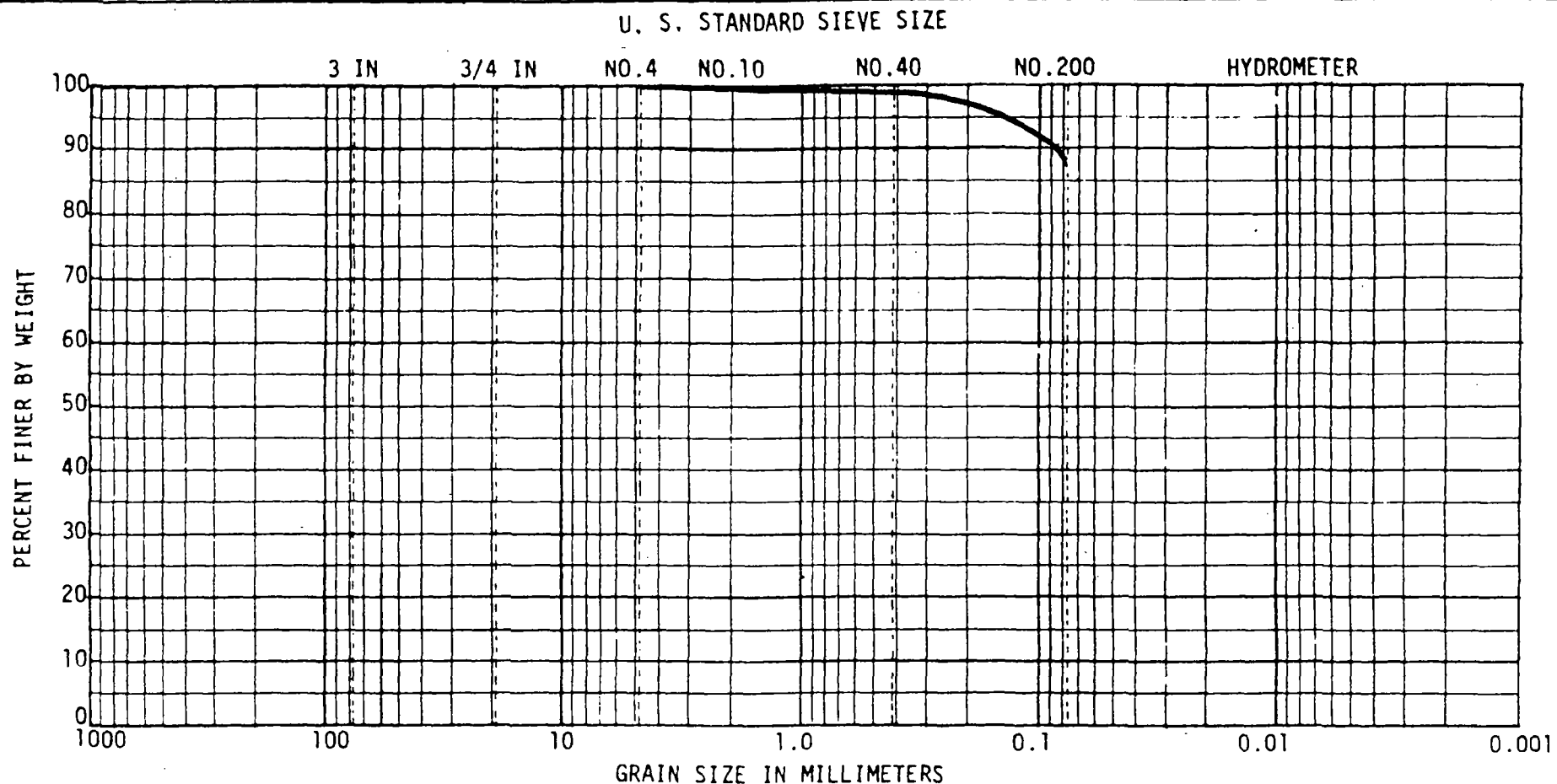


GRAIN SIZE DISTRIBUTION

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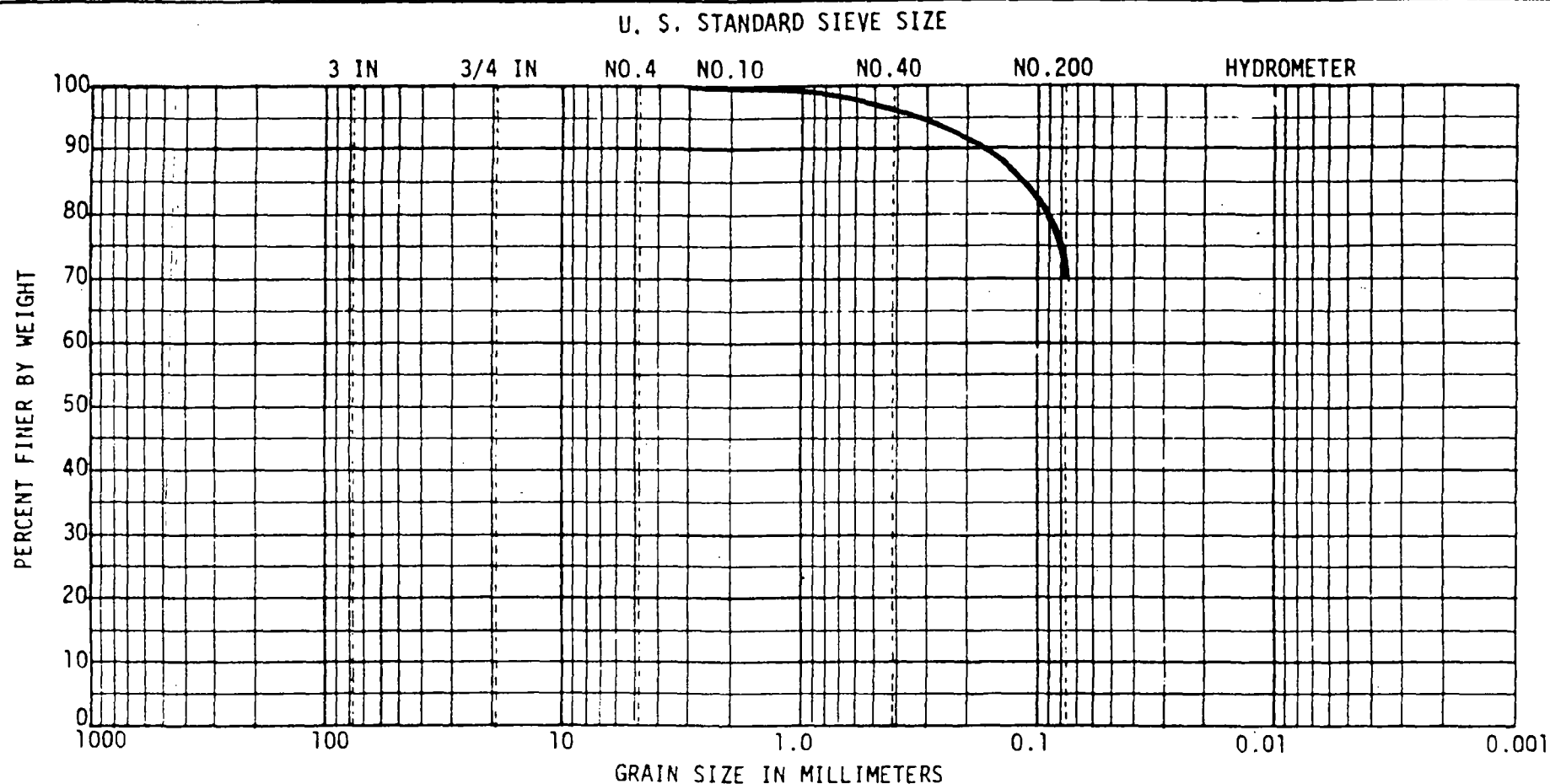
COBBLES		GRAVEL		SAND			SILT OR CLAY
		Coarse	Fine	Coarse	Medium	Fine	
SAMPLE	DEPTH	CLASSIFICATION		NAT WC	LL	PL	PI
SW4	55-67Ft	Tan Fine Sandy SILT		15.5	40	37	9
S/11							
S/12							
S/13		(ML)					
		0-5% Mica					

GRAIN SIZE DISTRIBUTION

Medley Farms

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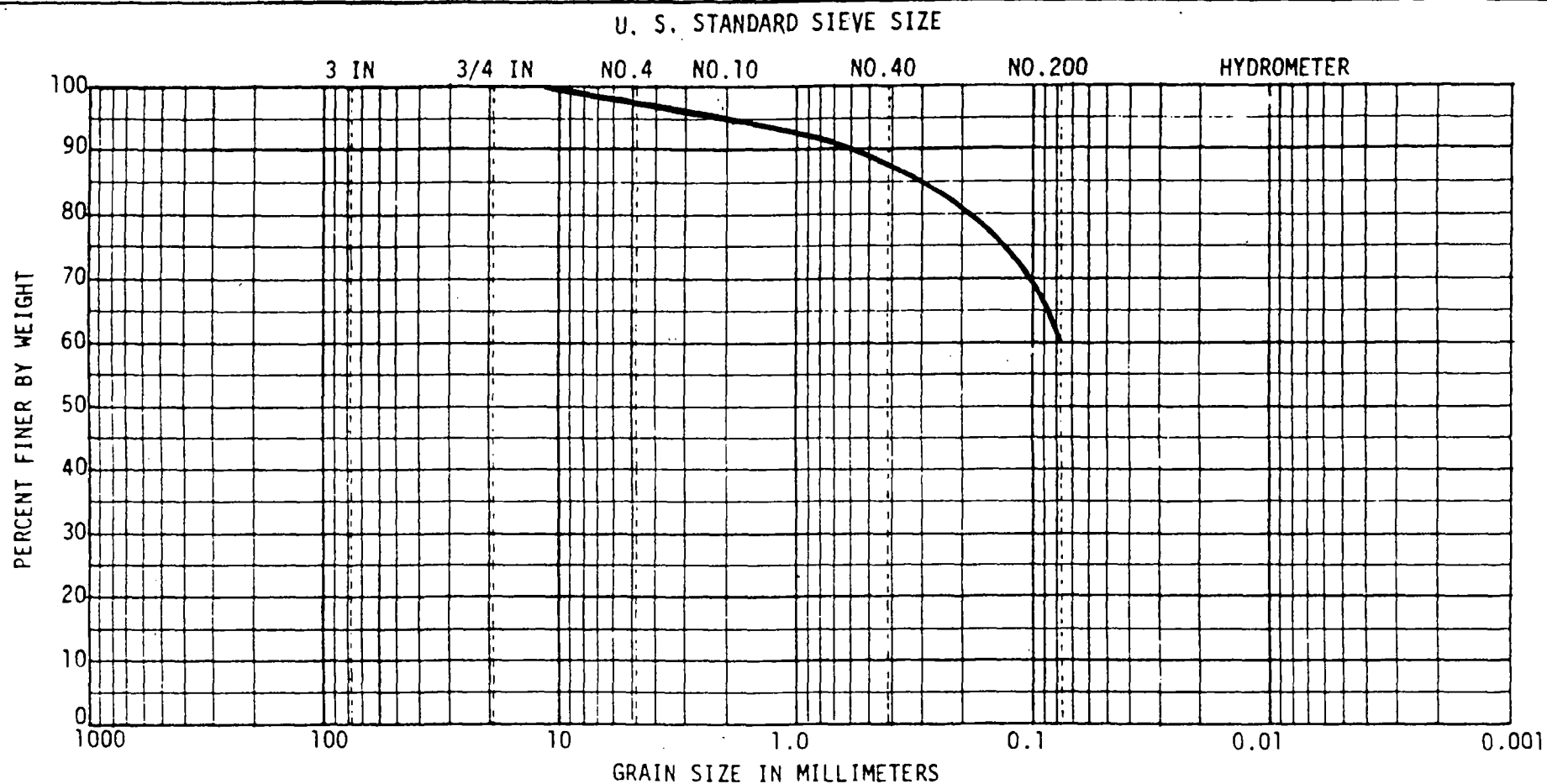


GRAIN SIZE DISTRIBUTION

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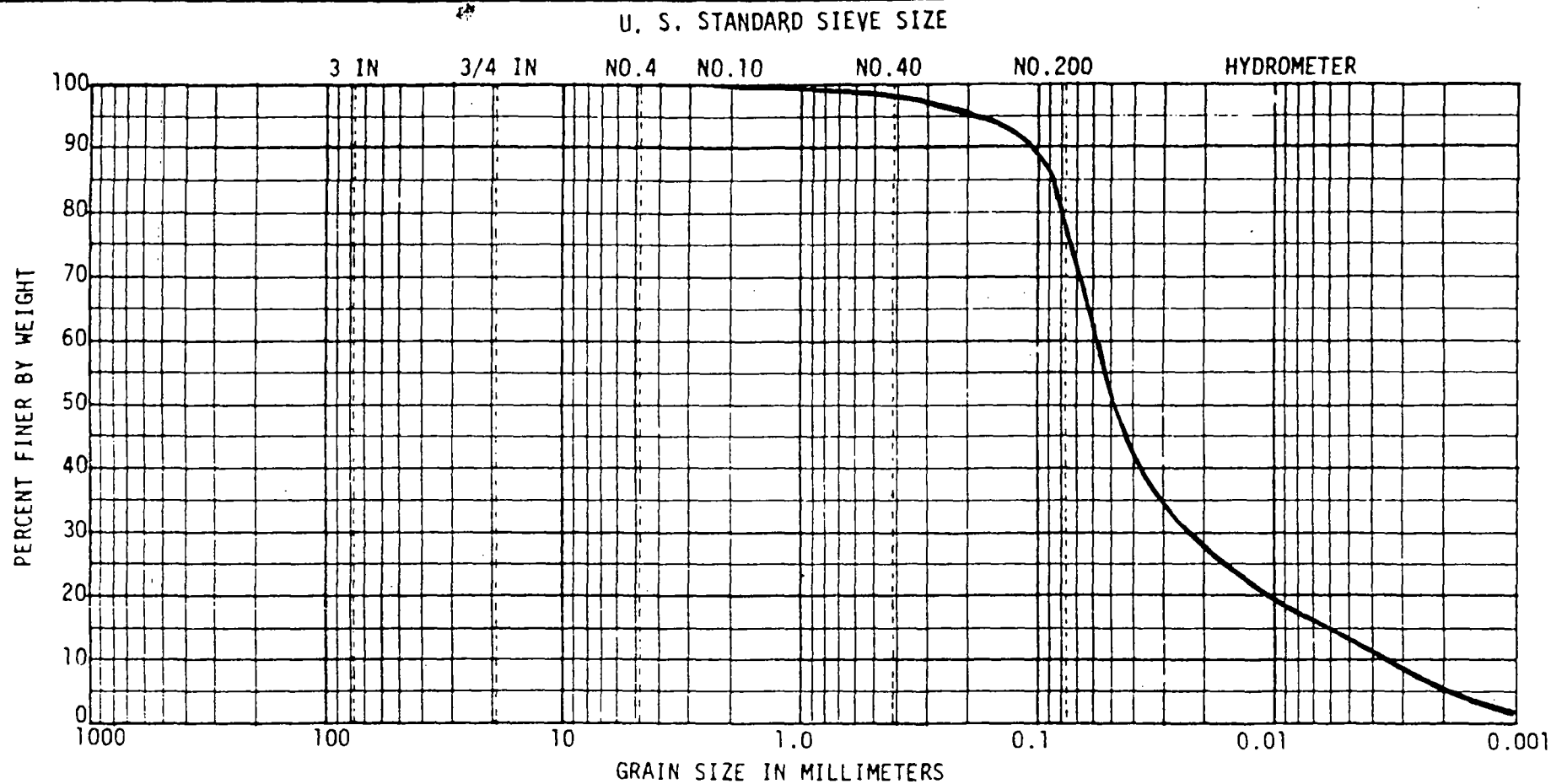
COBBLES		GRAVEL		SAND			SILT OR CLAY
		Coarse	Fine	Coarse	Medium	Fine	
SAMPLE	DEPTH	CLASSIFICATION		NAT WC	LL	PL	PI
BW4	5-7Ft	Grey Clayey Fine to			23	19	4
S/1		Coarse Sandy SILT					
		(ML)					
		5-15% Mica					

GRAIN SIZE DISTRIBUTION

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COBBLES		GRAVEL		SAND			SILT OR CLAY	
		Coarse	Fine	Coarse	Medium	Fine		
SAMPLE	DEPTH	CLASSIFICATION		NAT	WC	LL	PL	PI
SW3	5-7Ft	Red Fine Sandy SILT						
S/1								
		(ML)						
		5-15% Mica						

GRAIN SIZE DISTRIBUTION

Medley Farms

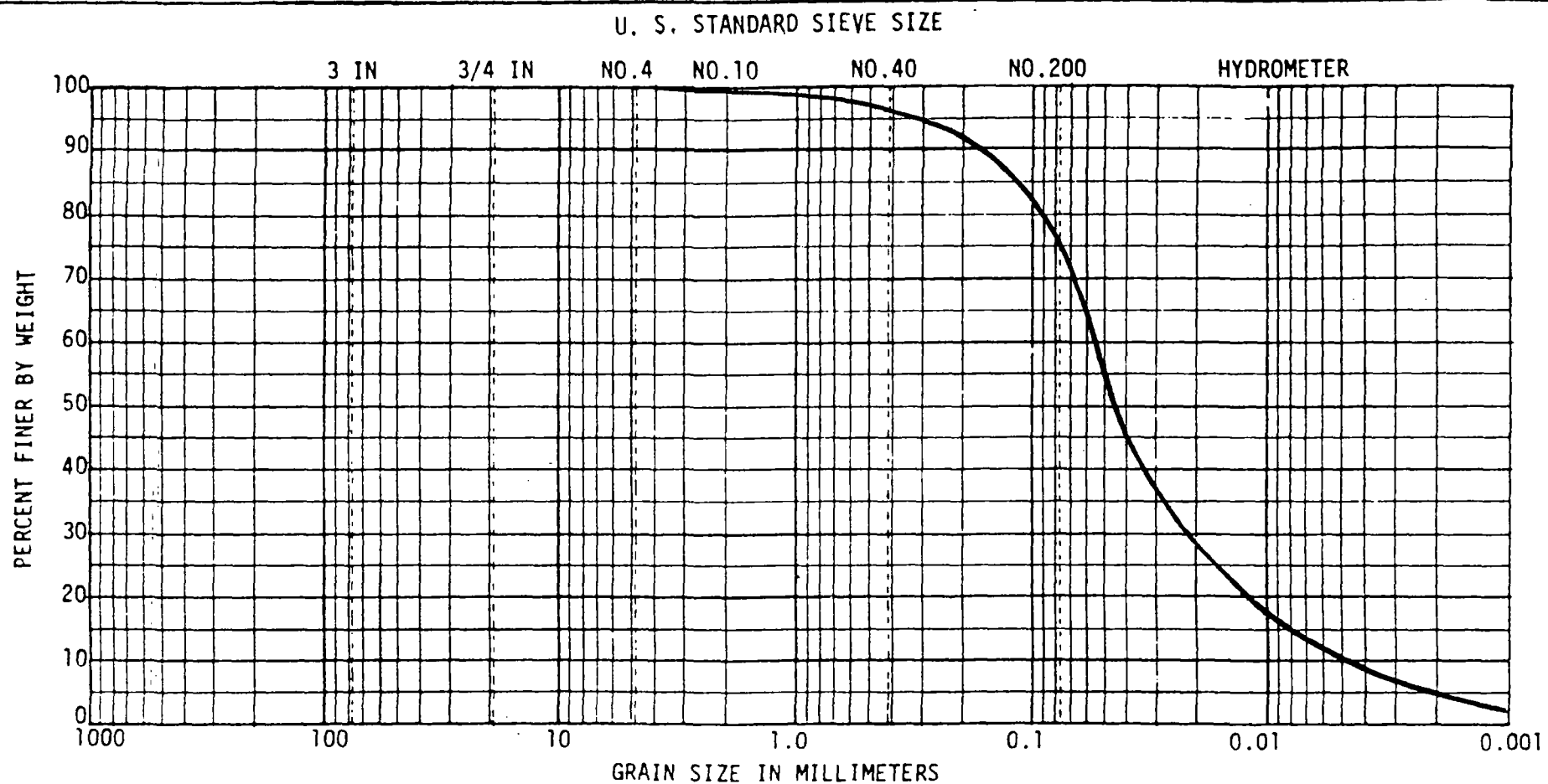
Gaffney, S.C.

GRAIN SIZE DISTRIBUTION

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Gaffney, S.C.

Geo-Systems
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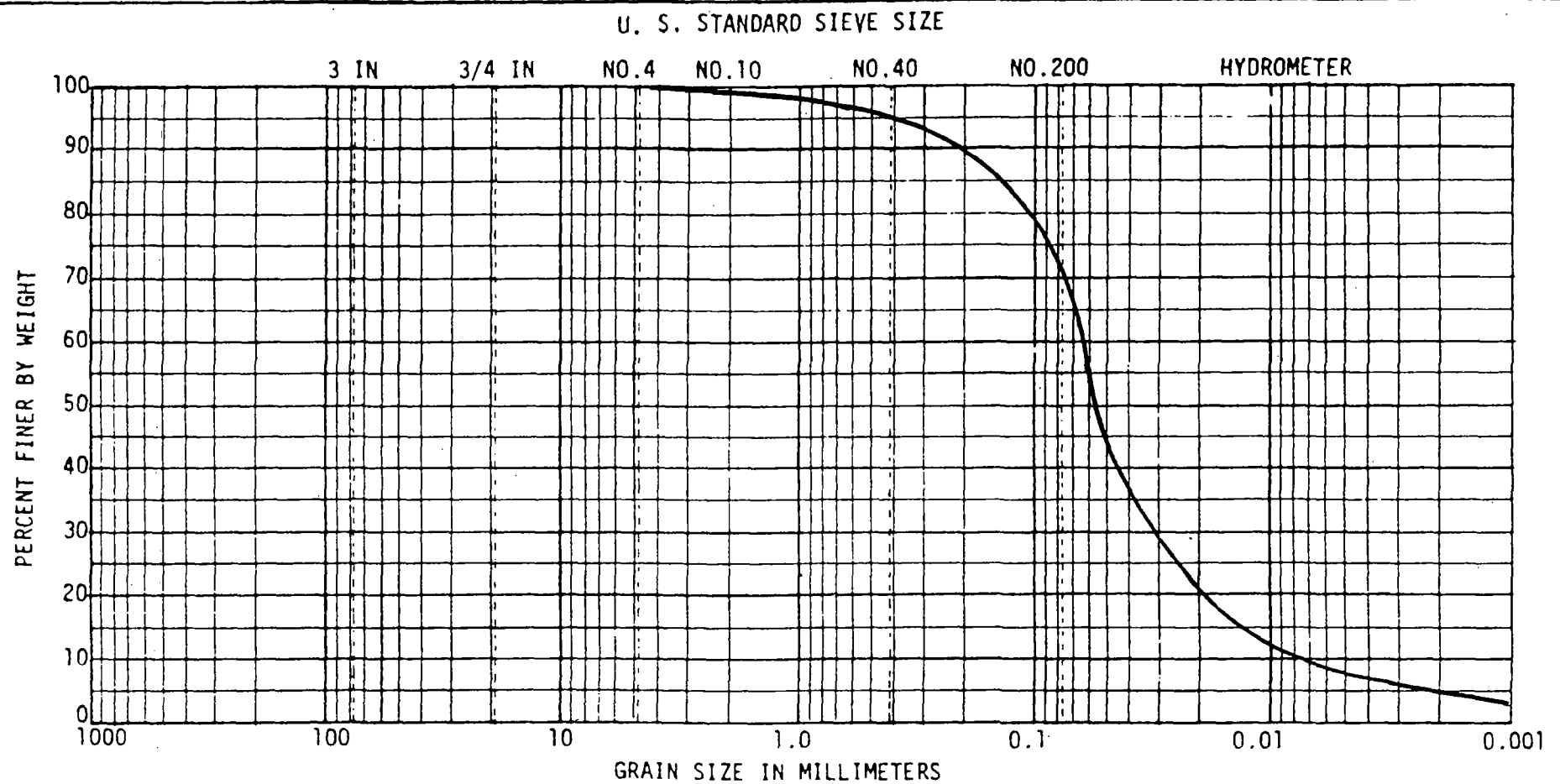


GRAIN SIZE DISTRIBUTION

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COBBLES	GRAVEL		SAND			SILT OR CLAY
	Coarse	Fine	Coarse	Medium	Fine	

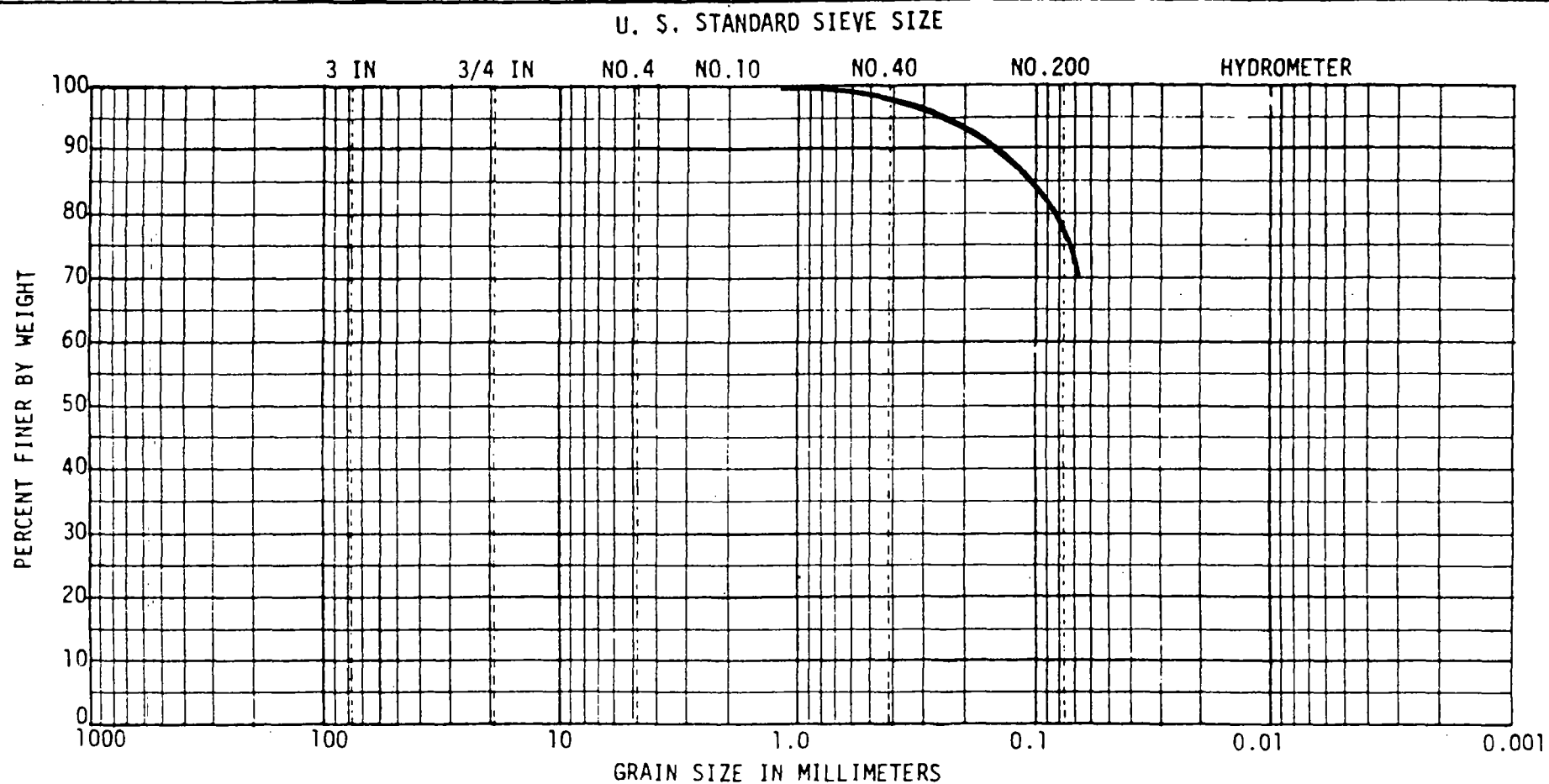
SAMPLE	DEPTH	CLASSIFICATION	NAT WC	LL	PL	PI
BW1	20-42Ft	Tan Fine Sandy SILT		29	23	6
S/4						
S/5						
S/6		(ML)				
S/7		0-5% Mica				

GRAIN SIZE DISTRIBUTION

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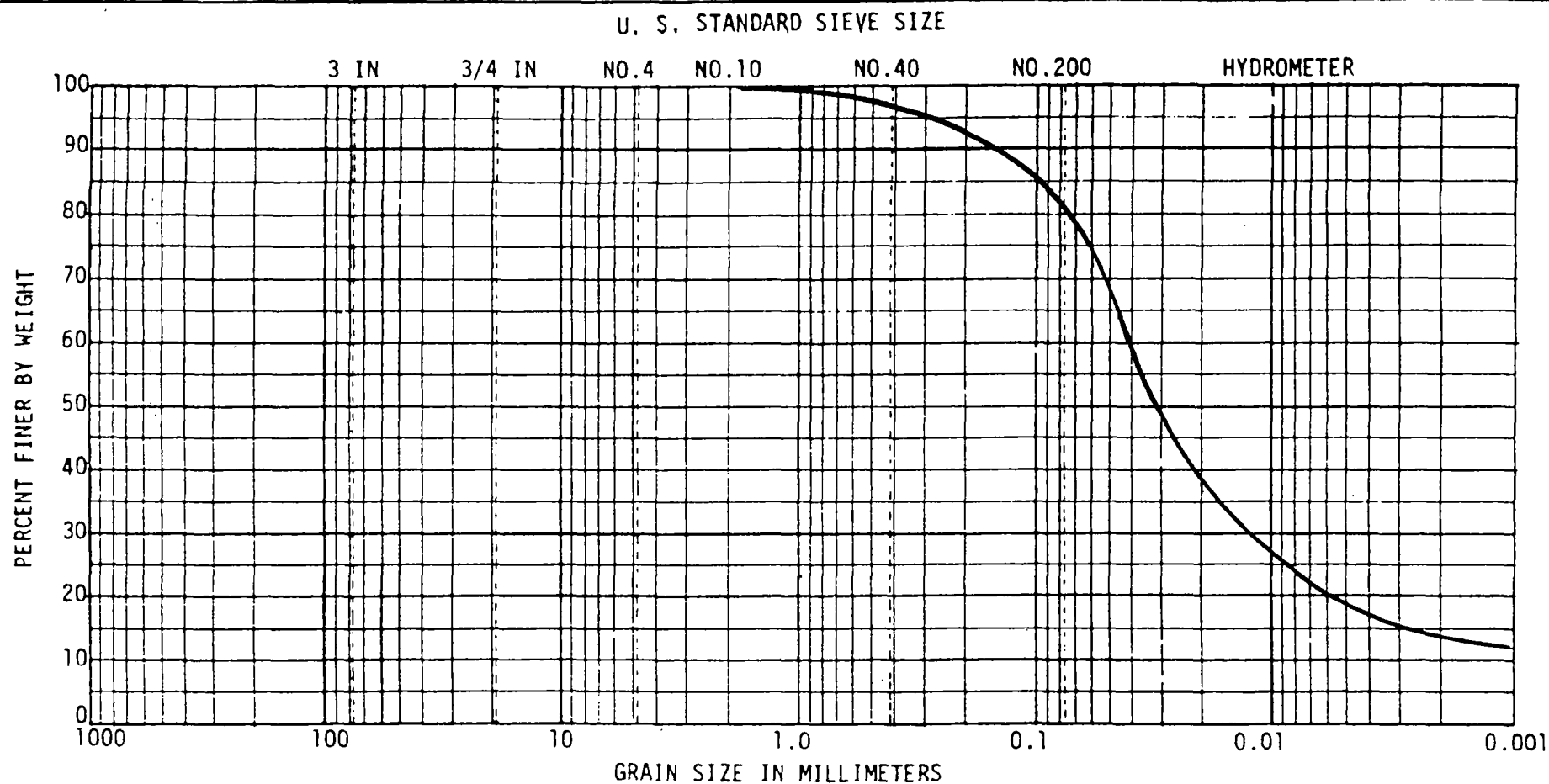
SAMPLE	DEPTH	CLASSIFICATION	NAT WC	LL	PL	PI
SW3	50-62Ft	Tan Fine Sandy SILT	17.4			
S/10						
S/11						
		(ML)				
		5-15% Mica				

GRAIN SIZE DISTRIBUTION

Medley Farms

Gaffney, S.C.

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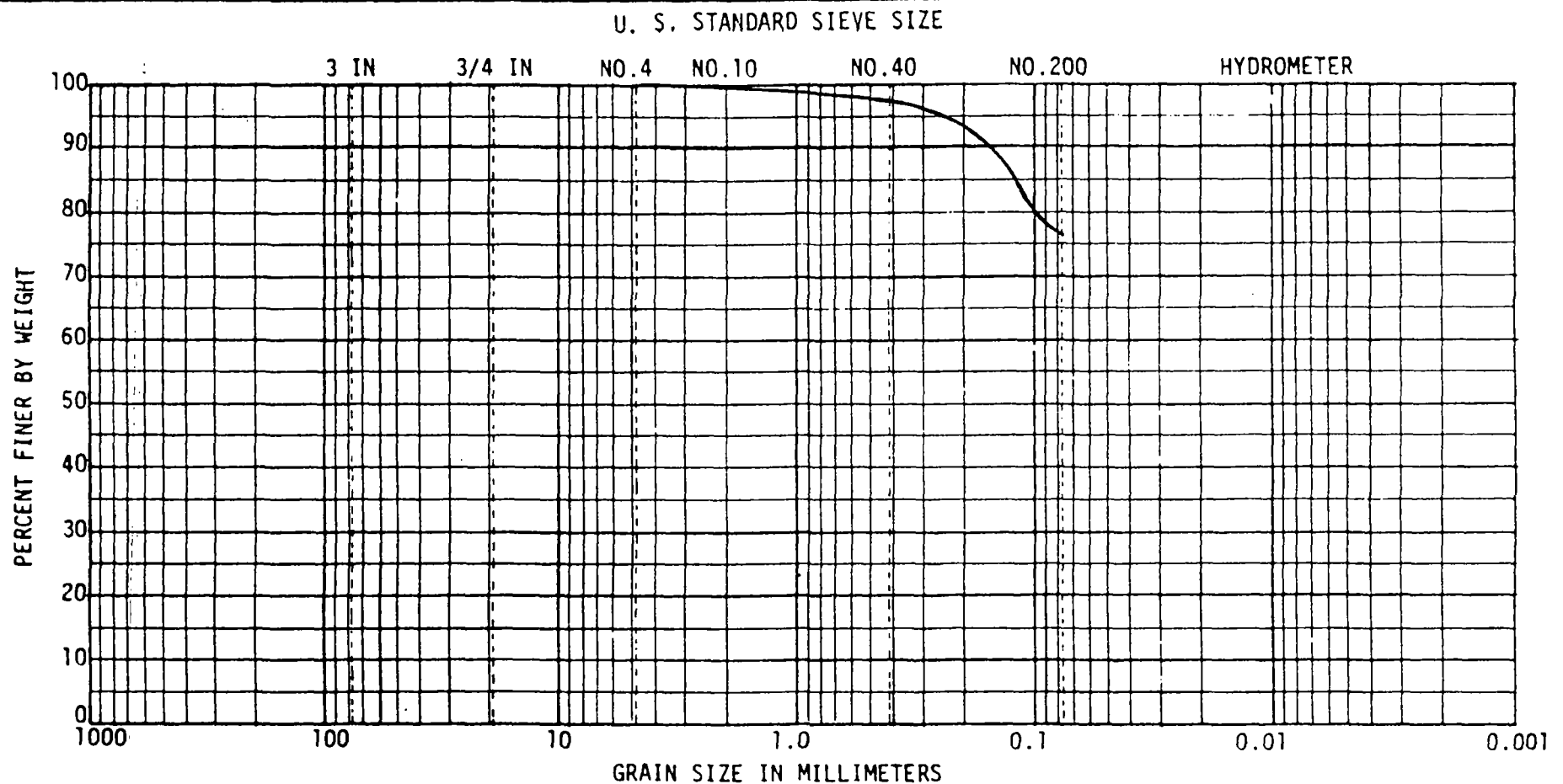
*Note: Jar was broken during Transport

GRAIN SIZE DISTRIBUTION

Medley Farms

Gaffney, S.C.

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COBBLES	GRAVEL		SAND			SILT OR CLAY
	Coarse	Fine	Coarse	Medium	Fine	

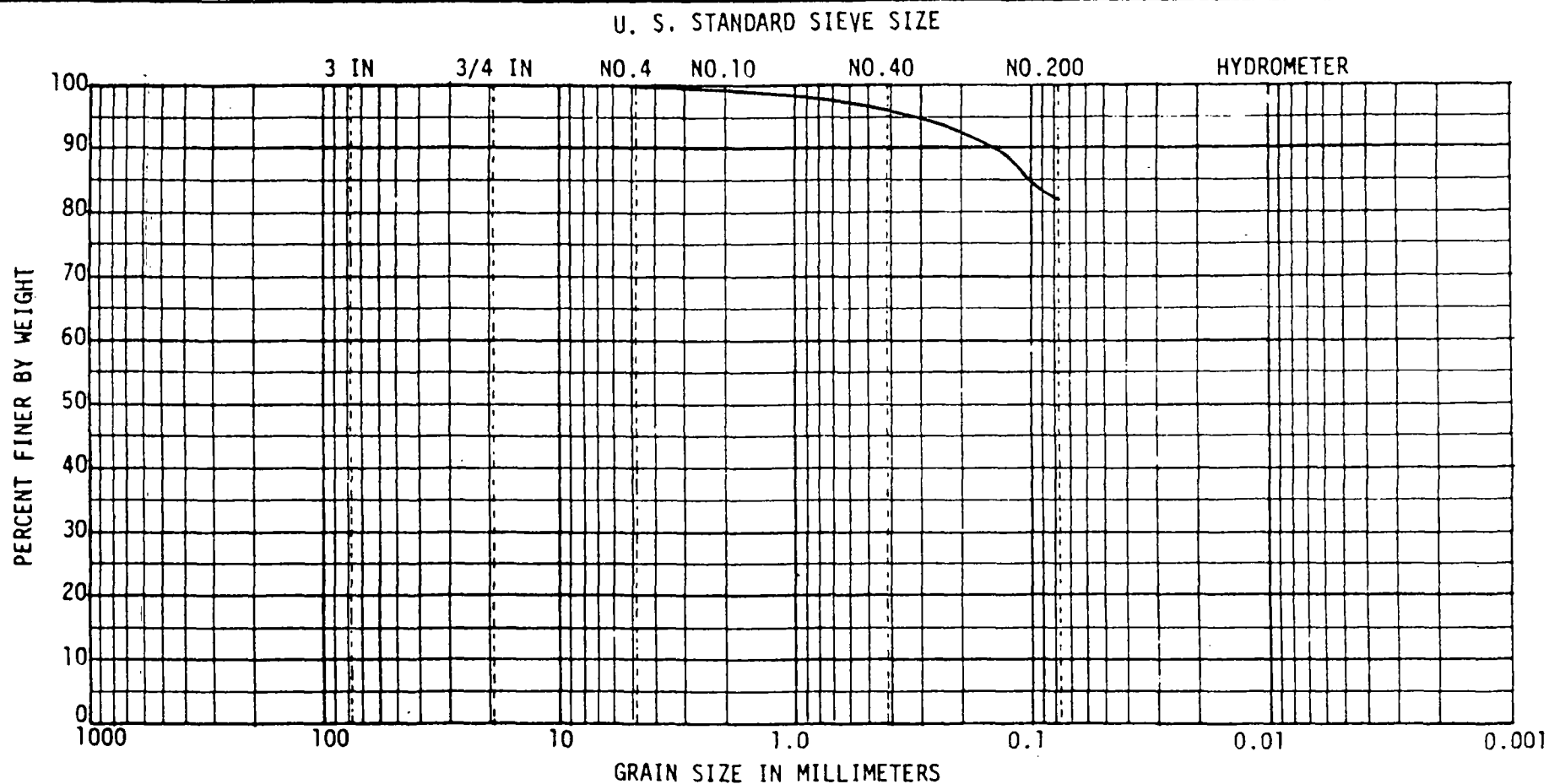
SAMPLE	DEPTH	CLASSIFICATION	NAT WC	LL	PL	PI
SB1	5-17Ft.	Tan Fine	23.9			
S1, S2		Sandy SILT				
S3		with trace of CLAY				
		(ML)				

5-15% Mica

GRAIN SIZE DISTRIBUTION

Medley Farms RI/FS
SEC Job No. G-8026


Geo-Systems
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COBBLES		GRAVEL		SAND			SILT OR CLAY
		Coarse	Fine	Coarse	Medium	Fine	
SAMPLE	DEPTH	CLASSIFICATION		NAT WC	LL	PL	PI
SB2	3-7 Ft.	Tan Fine		26.8	54	27	27
S0,S1		Sandy SILT					
		with trace of CLAY					
		MH/CH					
		0-5% Mica					

GRAIN SIZE DISTRIBUTION

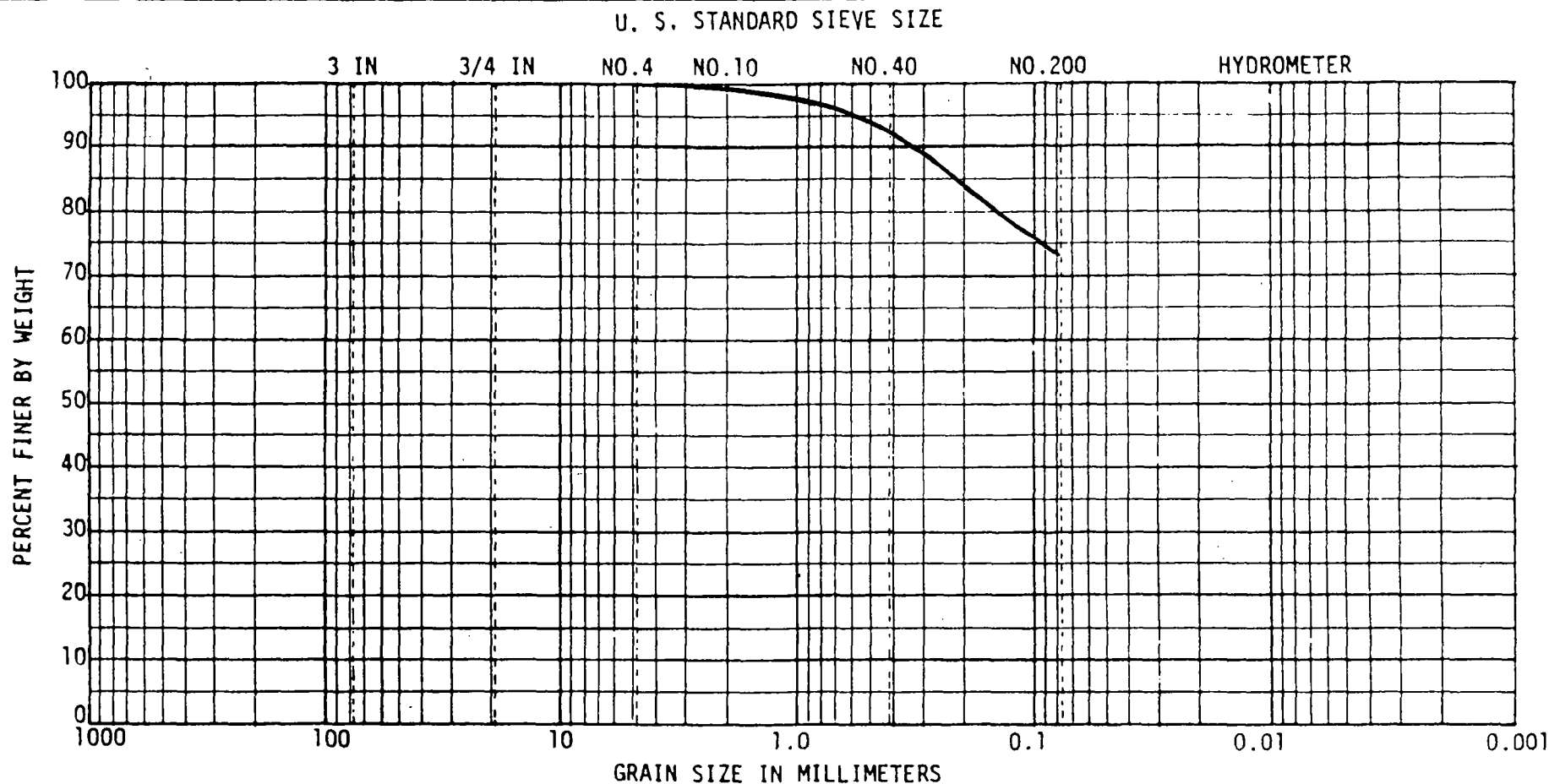
Medley Farms RI/FS
SEC Job. no. G-8026



GRAIN SIZE DISTRIBUTION

Medley Farms RI/FS
SEC Job. no. G-8026

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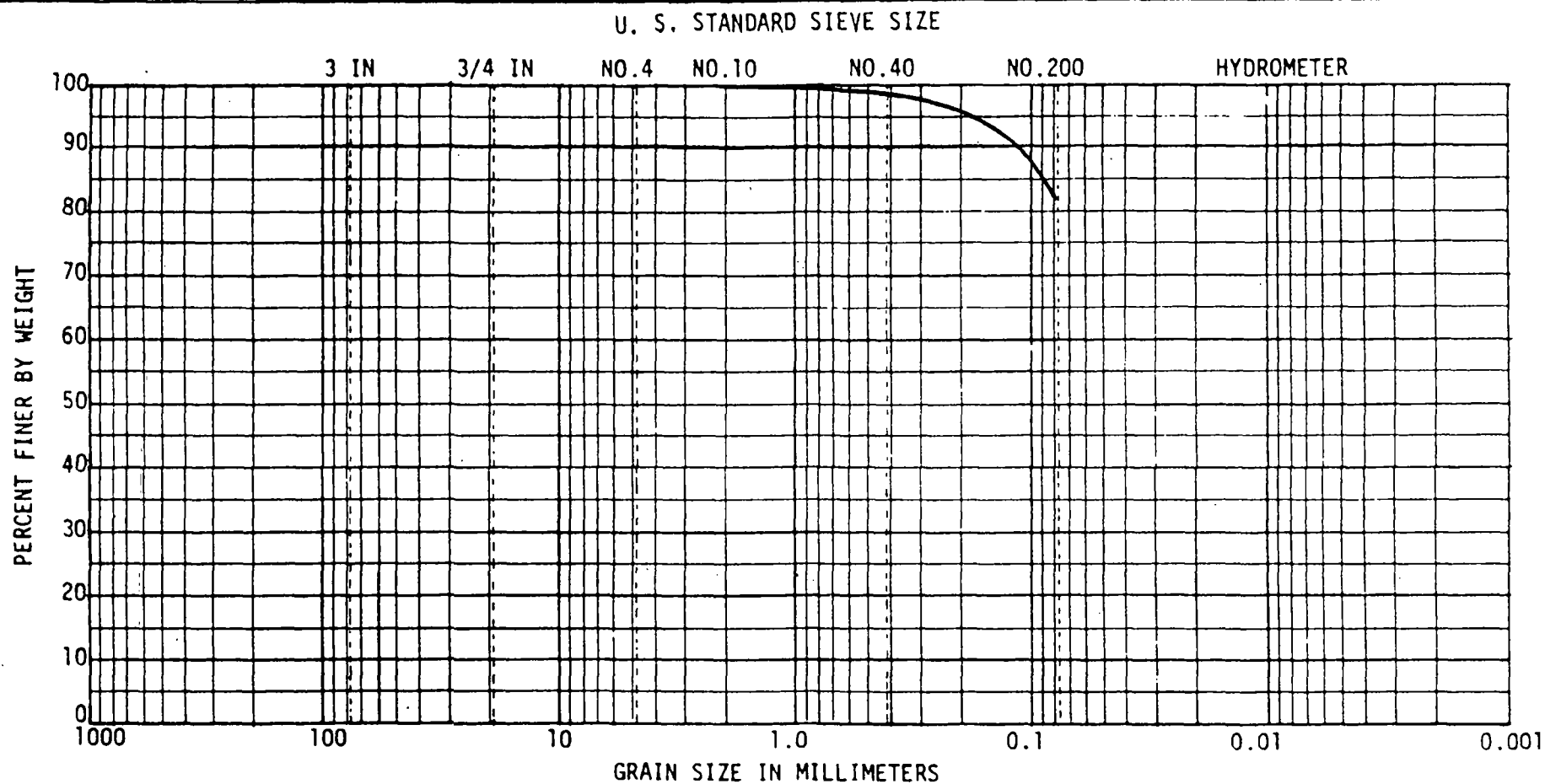


		GRAVEL		SAND			SILT OR CLAY
		Coarse	Fine	Coarse	Medium	Fine	
SAMPLE	DEPTH	CLASSIFICATION		NAT WC	LL	PL	PI
SB3	15-25Ft.	Tan Fine		14.9			
S3, S4		Sandy SILT					
S5		with trace of CLAY					
		ML/CL					
		15-30% Mica					

GRAIN SIZE DISTRIBUTION

Medley Farms RI/FS
SEC Job no. G-8026

Geo-Systems
Design & Testing, Inc.



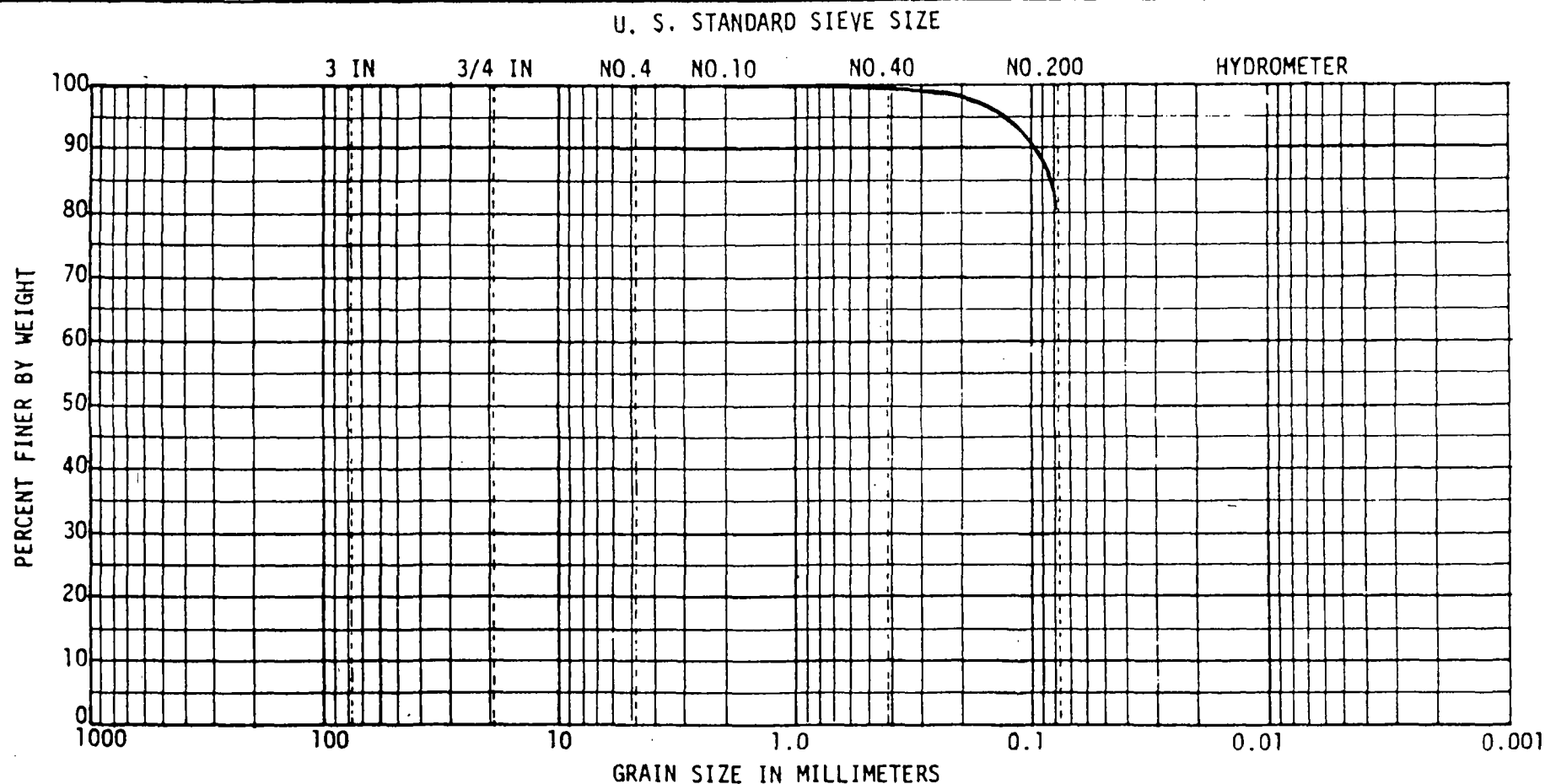
COBBLES		GRAVEL		SAND			SILT OR CLAY
		Coarse	Fine	Coarse	Medium	Fine	
SAMPLE	DEPTH	CLASSIFICATION		NAT WC	LL	PL	PI
SB4	10-25Ft	Tan Fine		19.6	41.0	36.0	5.0
S2, S3		Sandy SILT					
S4, S5		with trace of CLAY					
		ML					

15-30% Mica

GRAIN SIZE DISTRIBUTION

Medley Farms RI/FS
SEC Job no. G-8026

Geo-Systems
Design & Testing, Inc.

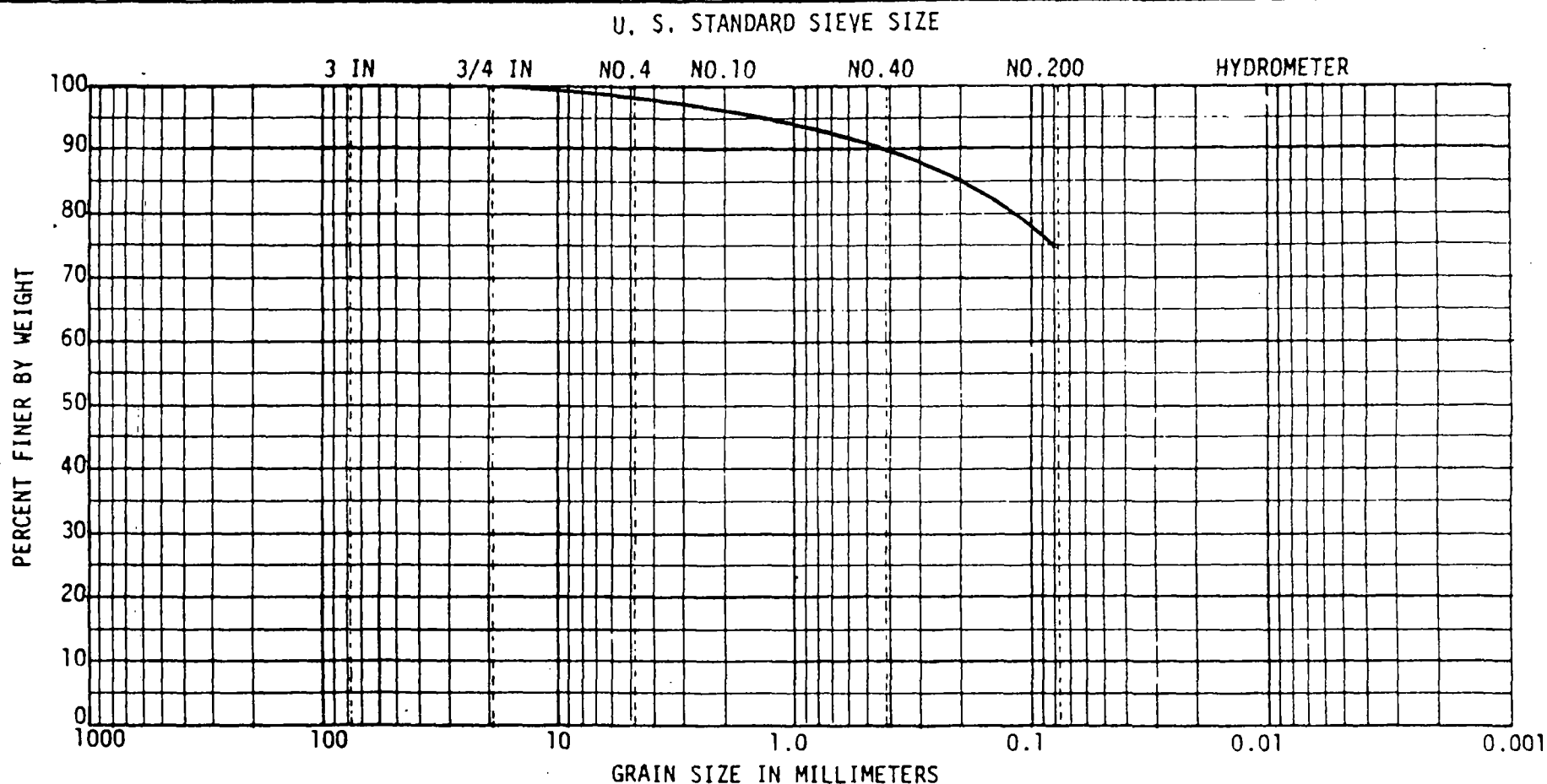


SAMPLE	DEPTH	CLASSIFICATION	NAT WC	LL	PL	PI
SB5	2-4 Ft	Red Fine	23.0	53.	45.0	8.0
S0		Sandy SILT				
		with trace of CLAY				
		MH/ML				
		15-30%				

GRAIN SIZE DISTRIBUTION

Medley Farms RI/FS
SEC Job no. G-8026

Geo-Systems
Design & Testing, Inc.



COBBLES	GRAVEL		SAND			SILT OR CLAY
	Coarse	Fine	Coarse	Medium	Fine	

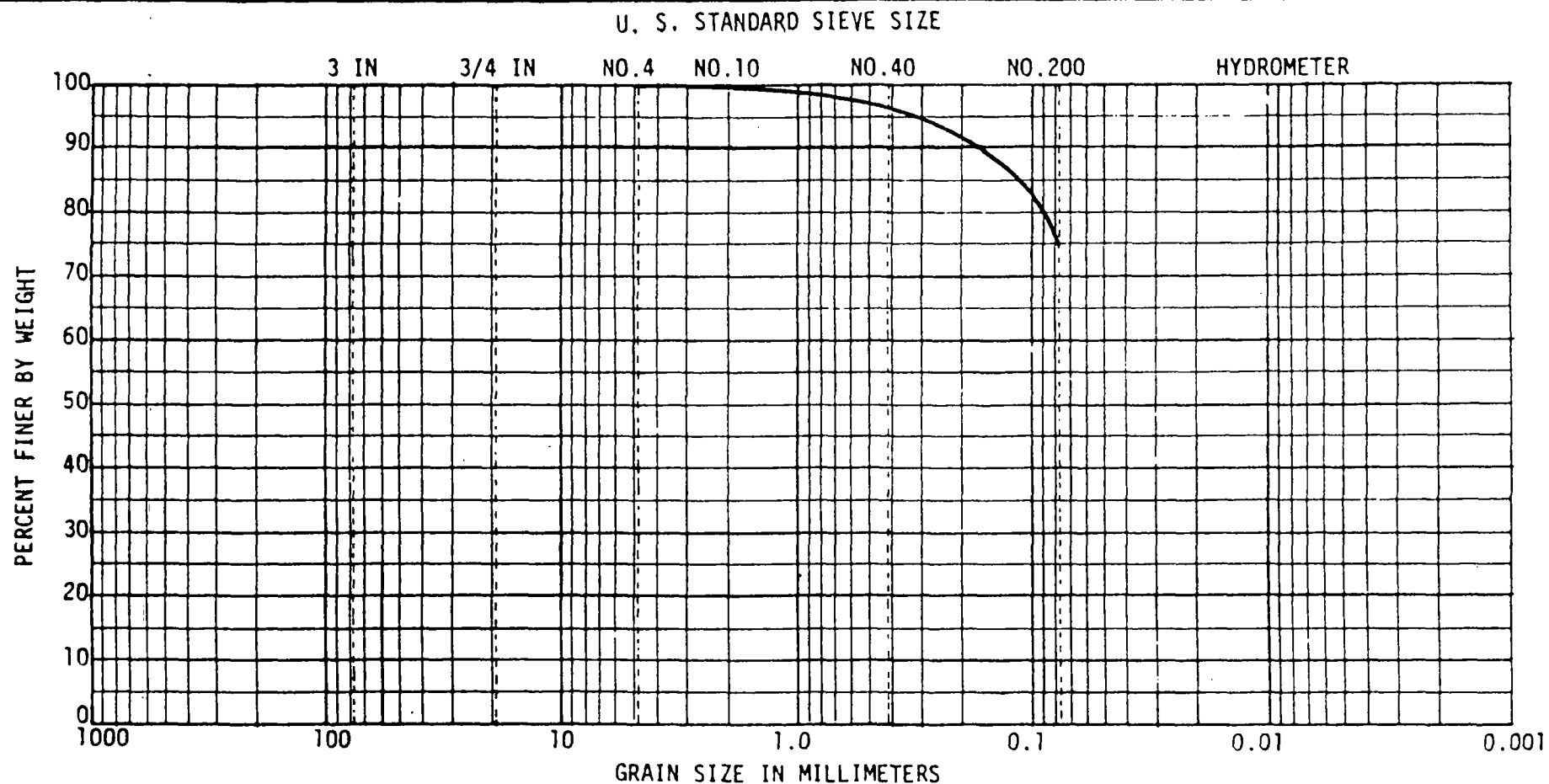
SAMPLE	DEPTH	CLASSIFICATION	NAT WC	LL	PL	PI
SB6	15-25Ft.	Tan and Brown	21.0	35.0	22.0	13
S3, S4		Fine Sandy SILT				
S5		with trace of CLAY				
		CL/ML				

15-30% Mica

GRAIN SIZE DISTRIBUTION

Medley Farms RI/FS
SEC Job no. G-8026

Geo-Systems
Design & Testing, Inc.



COBBLES	GRAVEL		SAND			SILT OR CLAY
	Coarse	Fine	Coarse	Medium	Fine	

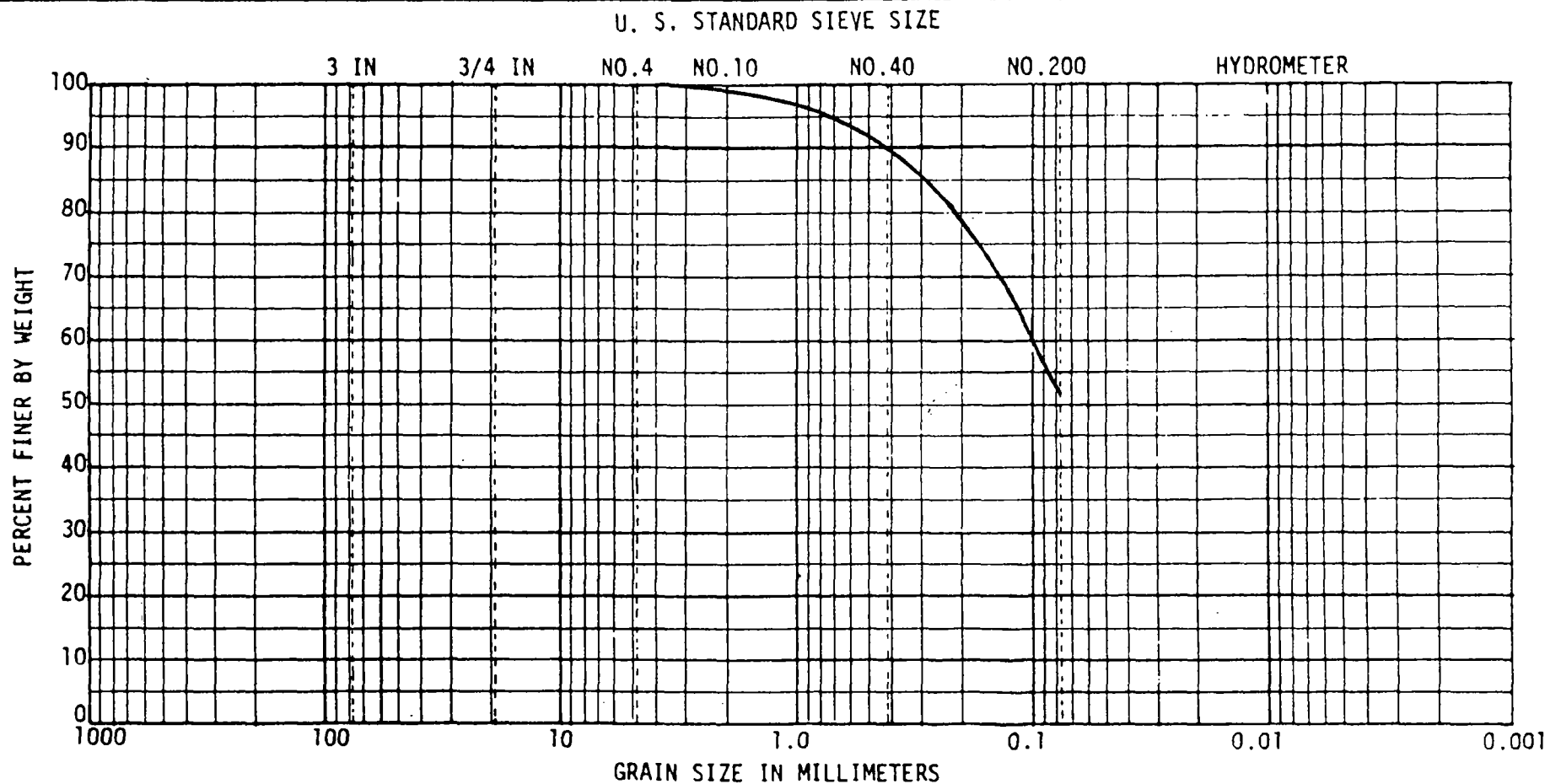
SAMPLE	DEPTH	CLASSIFICATION	NAT WC	LL	PL	PI
SR7	10-12ft	Brown Fine	19.5			
S2		Sandy SILT				
		with trace of CLAY				
		ML				

15-30% Mica

GRAIN SIZE DISTRIBUTION

Medley Farms RS/FI
SEC Job no. G-8026

Geo-Systems
Design & Testing, Inc.



COBBLES	GRAVEL		SAND			SILT OR CLAY
	Coarse	Fine	Coarse	Medium	Fine	

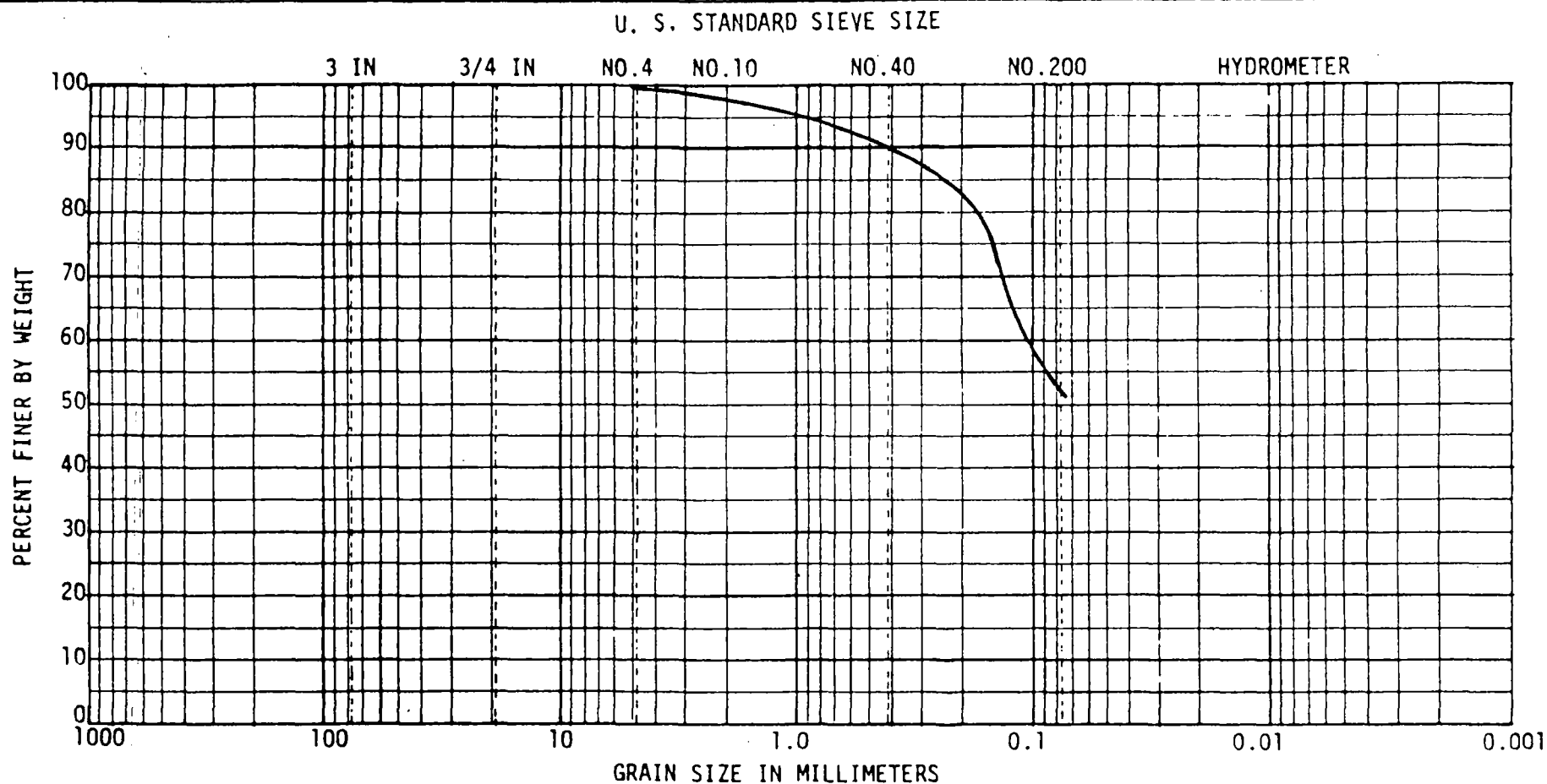
SAMPLE	DEPTH	CLASSIFICATION	NAT WC	LL	PL	PI
SB8	5-16 Ft	Tan Fine	6.4			
S1, S2		Sandy SILT				
S3		with gravel and trace of CLAY				
		ML				

0-5% Mica

GRAIN SIZE DISTRIBUTION

Medley Farms RI/FS
SEC Job no. G-8026

Geo-Systems
Design & Testing, Inc.



COBBLES	GRAVEL		SAND			SILT OR CLAY
	Coarse	Fine	Coarse	Medium	Fine	

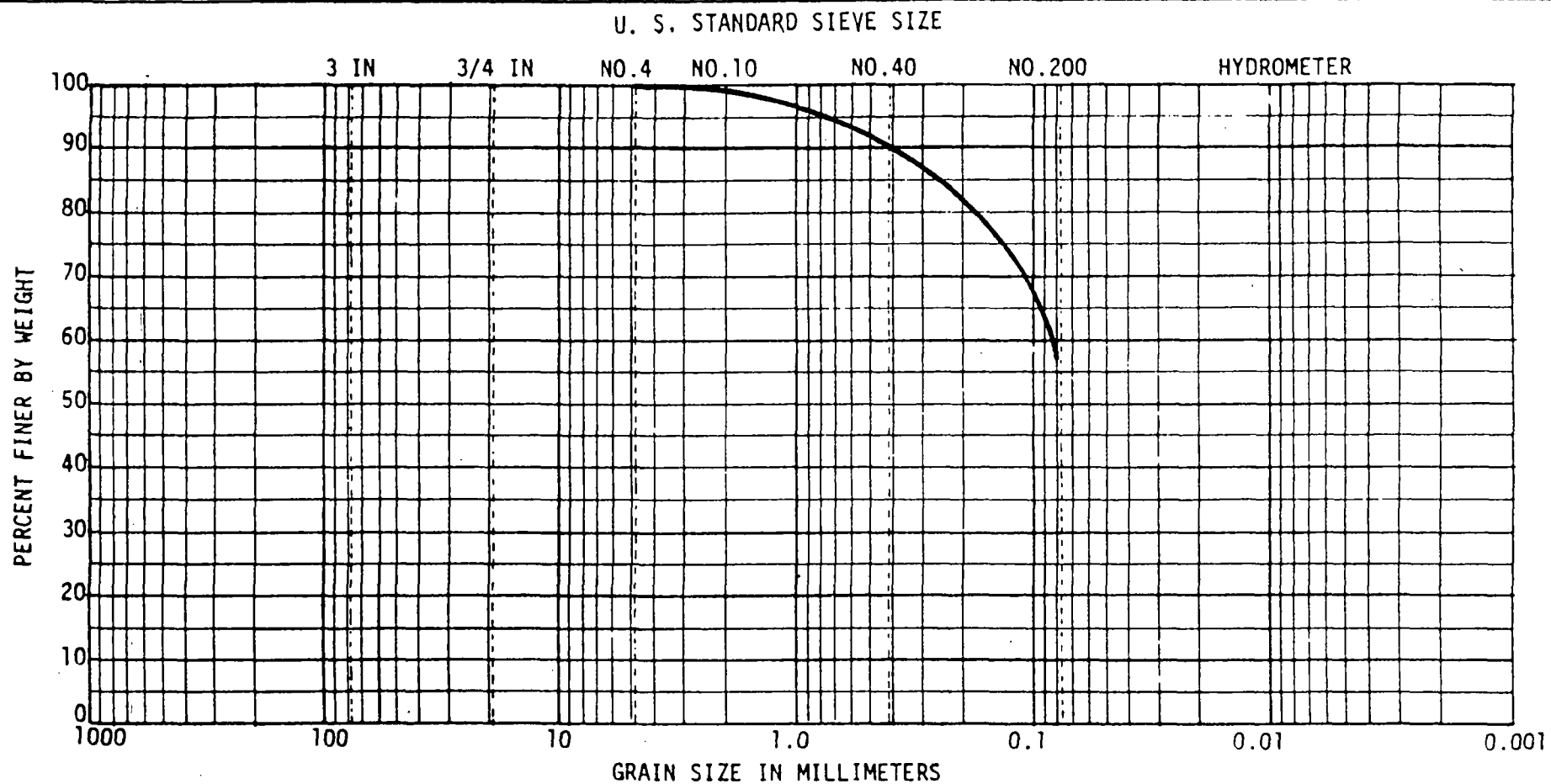
SAMPLE	DEPTH	CLASSIFICATION	NAT WC	LL	PL	PI
SB9	5-7 Ft	Fine Sandy	20.0	47.0	30.0	17.0
S1		SILT				
		with trace of CLAY				
		ML				

5-15% Mica

GRAIN SIZE DISTRIBUTION

Medley Farm RI/FS
SEC Job No. G-8026

Geo-Systems
Design & Testing, Inc.



COBBLES		GRAVEL		SAND			SILT OR CLAY
		Coarse	Fine	Coarse	Medium	Fine	
SAMPLE	DEPTH	CLASSIFICATION		NAT WC	LL	PL	PI
SB9	15-25Ft	Tan Fine Sandy SILT		14.3			
S3,S4		with trace of CLAY					
S5							
		ML					
		0-5% Mica					

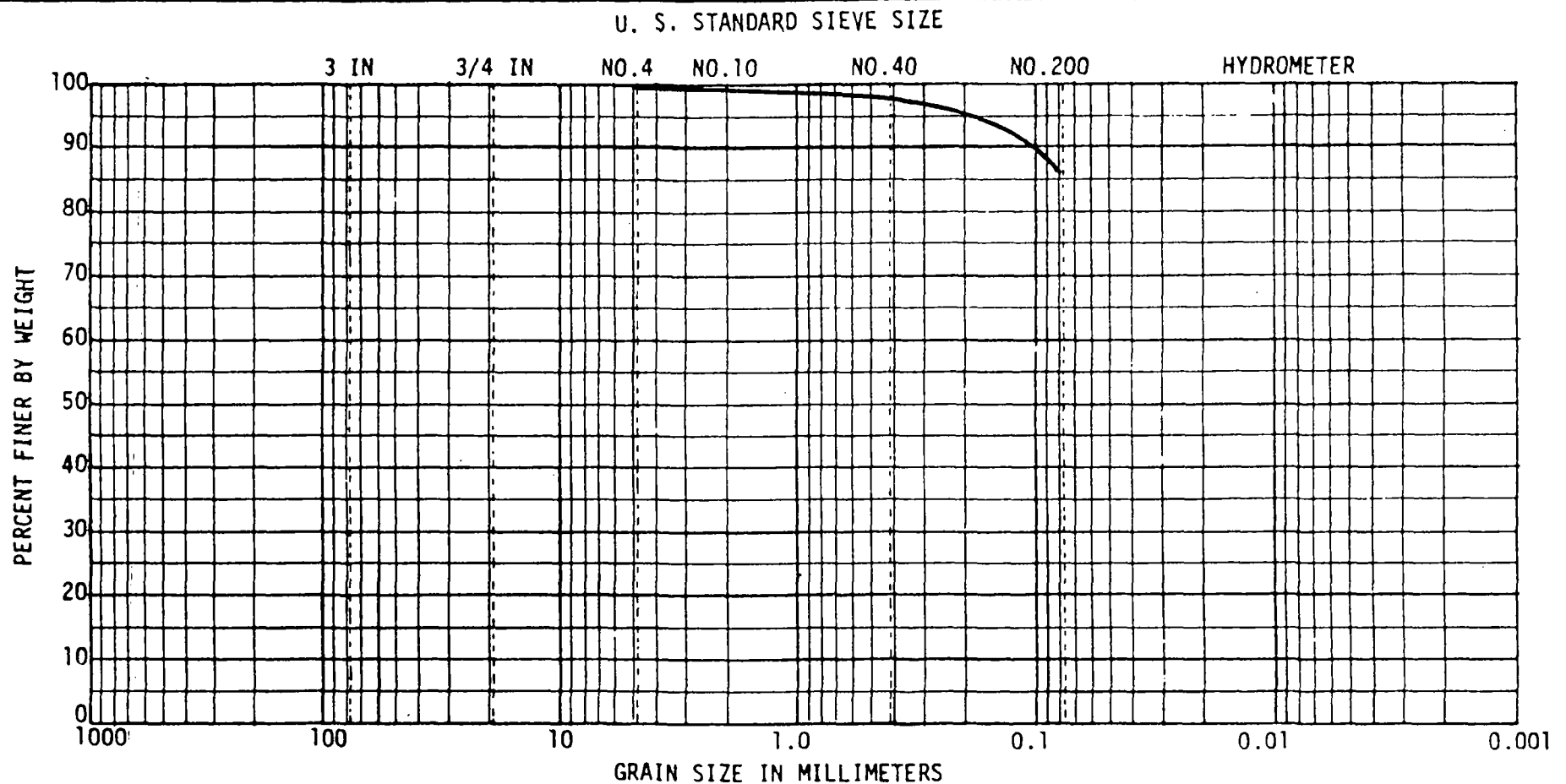
GRAIN SIZE DISTRIBUTION

Medley Farms RI/FS
SEC Job no. G-8026

GRAIN SIZE DISTRIBUTION

Medley Farms RI/FS
SEC Job no. G-8026

Geo-Systems
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COBBLES	GRAVEL		SAND			SILT OR CLAY
	Coarse	Fine	Coarse	Medium	Fine	

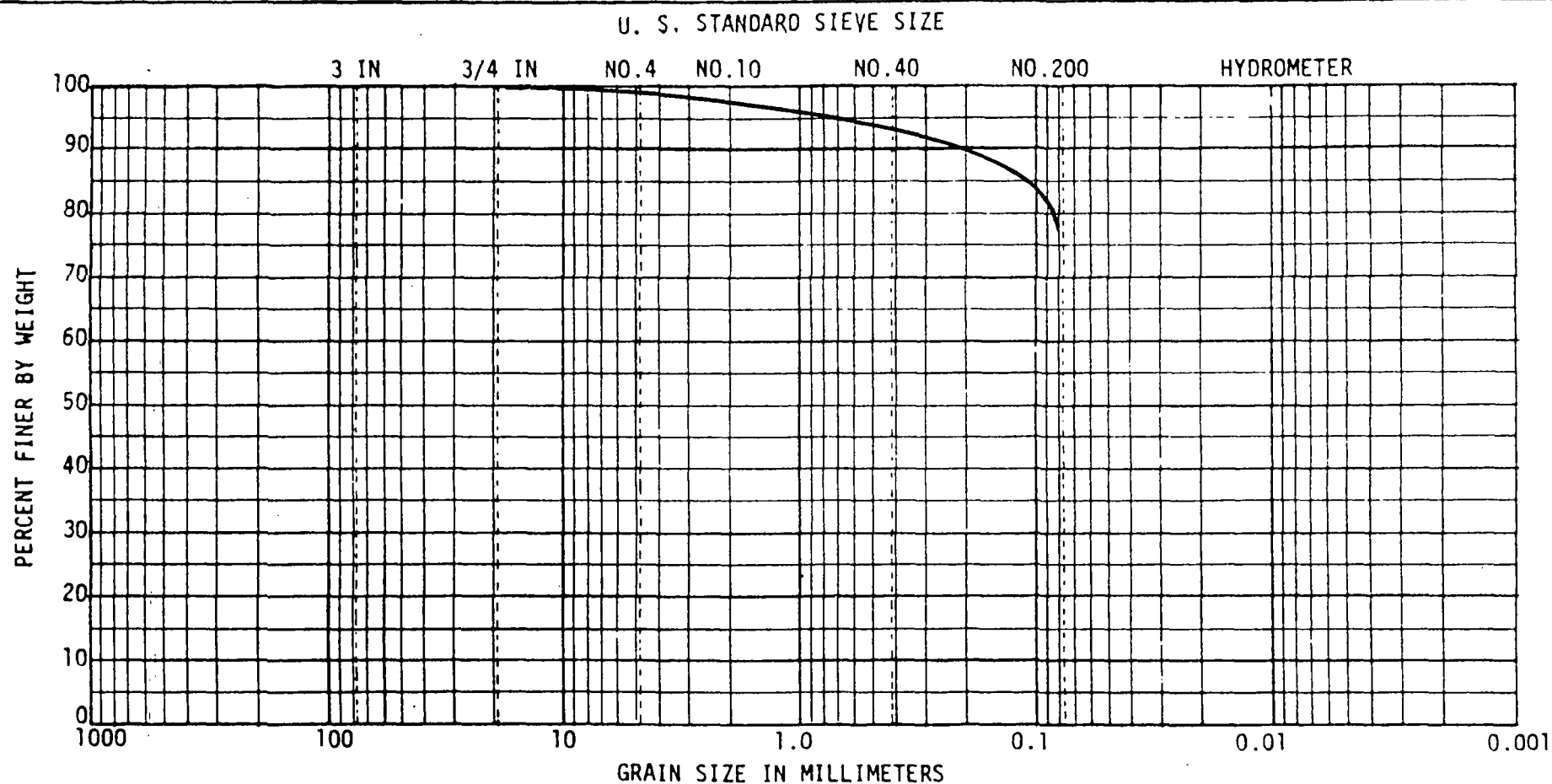
SAMPLE	DEPTH	CLASSIFICATION	NAT WC	LL	PL	PI
SB10	5-7 ft	Red and Tan	24.6	51.0	43.0	7.0
SI		Fine Sandy SILT				
		with trace of CLAY				
		MH				

5-15% Mica

GRAIN SIZE DISTRIBUTION

Medley Farms RI/FS
SEC Job no. G-8026

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15-30% Mica

GRAIN SIZE DISTRIBUTION

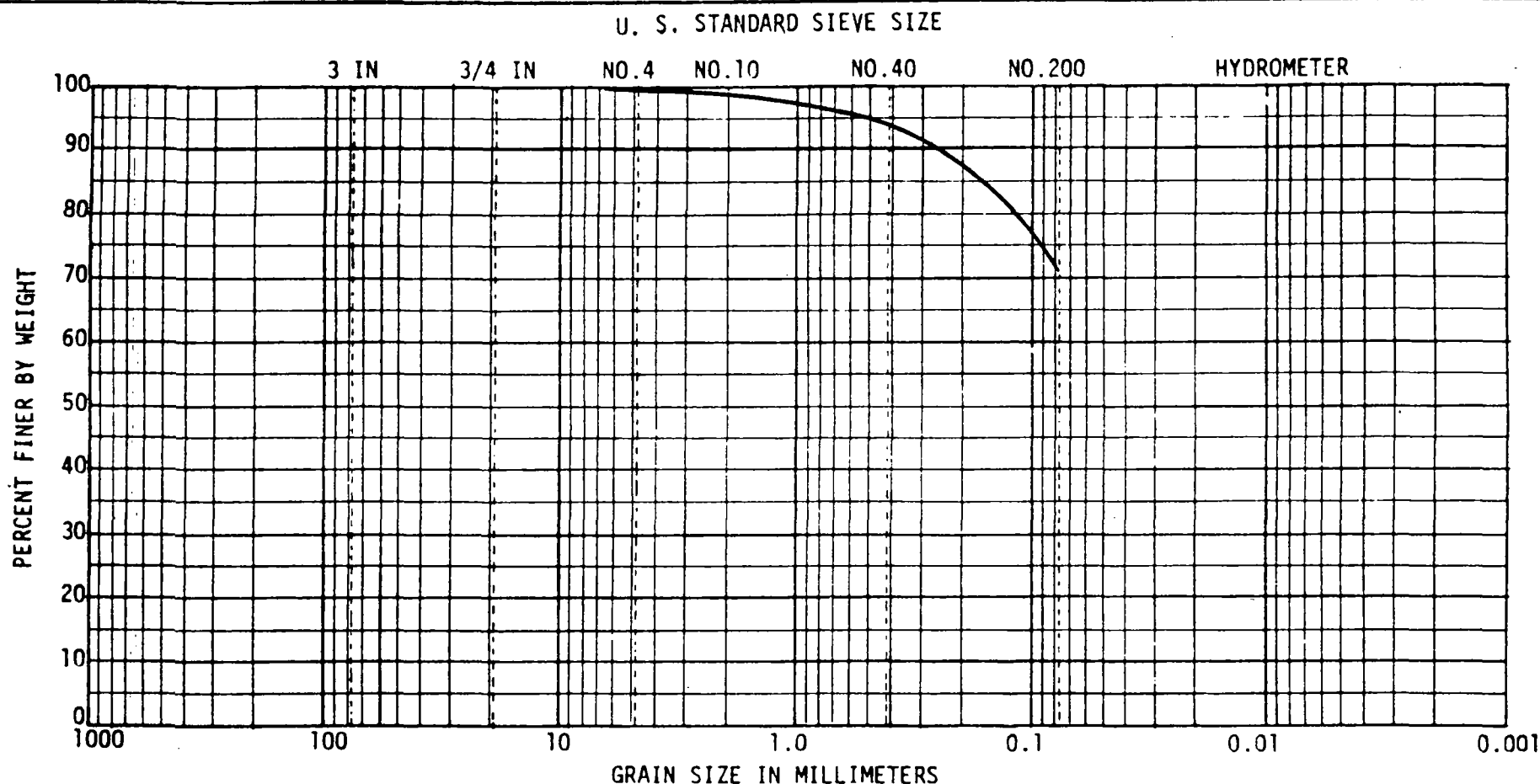
Medley Farms RI/FS
SEC Job no. G-8026

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GEOTECHNICAL SOIL ANALYSIS
MEDLEY FARM RI/FS
SEC JOB NO. G-8026

Exploration Number	Sample Number(s)	Sample Depth (ft)	Washed Sieve Ana.	Natural Moisture Content	Atterberg Limits	Total Organic Carbon
PZ101	S1, S2, S3	4-16	**	24.4		469 mg/kg
SW101	S5, S6	24-29.1	**			
SW101	S2	9.0-11.0	**	13.6		447 mg/kg
SW102	S2	9.0-11.0	**	15.5		484 mg/kg
SW102	S8, S9, S10	39.0-48.0	**			
SW103	S1	4.0-5.5	**	20.3	**	
SW103	S8, S9	39.0-45.0	**			
SW104	S2	9.0-11.0	**	14.3		
SW106	S4, S5	19.0-26.0	**			
SW108	S1	3.5-5.5	**	14.0	**	
SW108	S3, S4	13.5-20.0	**			
SW109	S2, S3	9.0-16.0	**	21.7	**	203 mg/kg
SW109	S6, S7, S8	29.0-39.5	**	13.2		
SW109	S12, S13, S14	59.0-69.0	**			
SW110	S5, S6	23.5-30.5	**	15.3		

****SEE ATTACHED GRAIN SIZE DISTRIBUTION SHEETS FOR SOIL DESCRIPTIONS, GRAIN SIZE ANALYSIS, ATTERBERG LIMITS, AND ESTIMATED MICA CONTENTS.**



COBBLES	GRAVEL		SAND			SILT OR CLAY
	Coarse	Fine	Coarse	Medium	Fine	

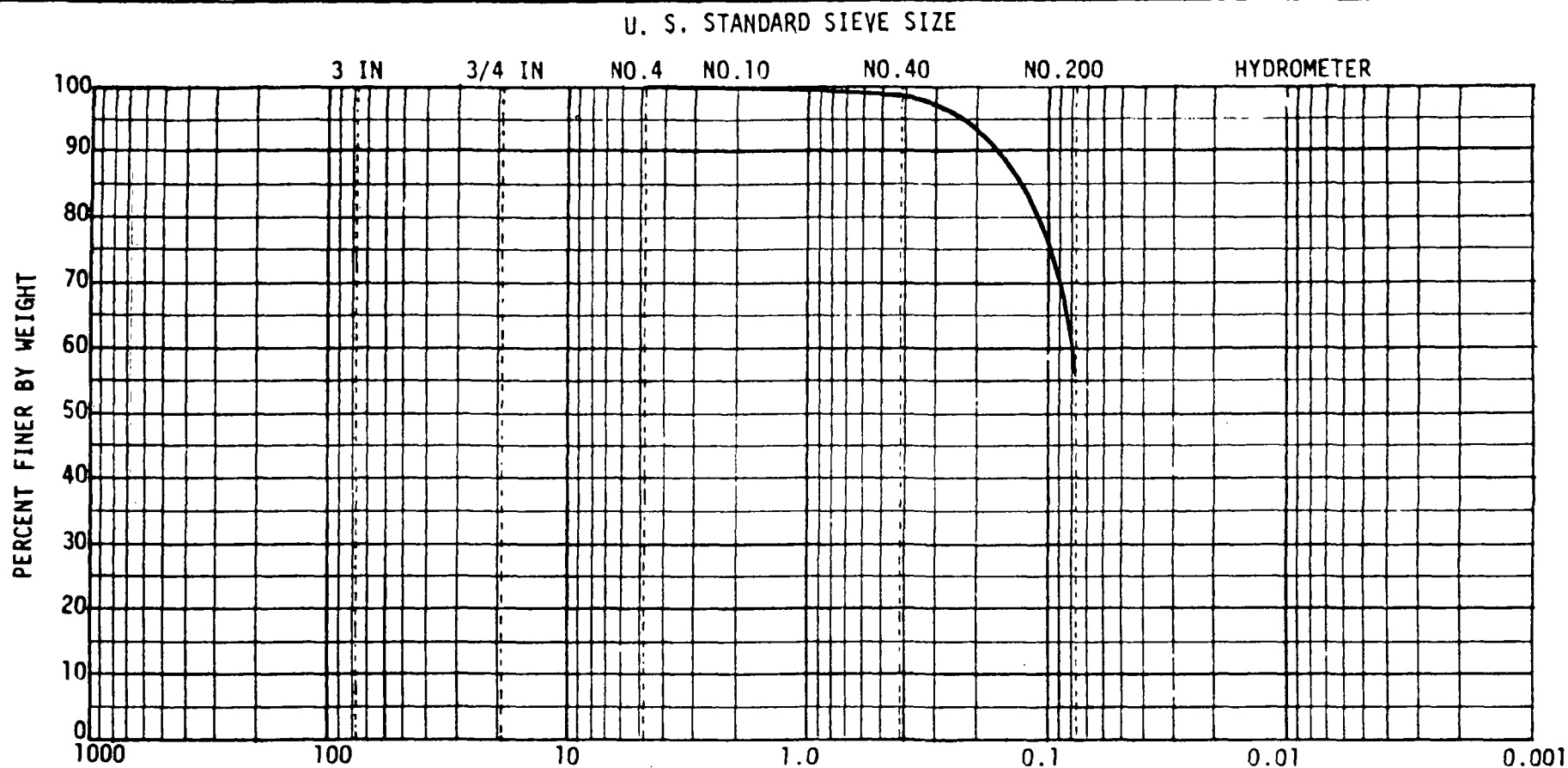
SAMPLE	DEPTH	CLASSIFICATION	NAT WC	LL	PL	PI
PZ 101	4.0-16.0'	Tan F/M Sandy Clayey SILT	24.4			
SL S2						
S3		(ML)				
		Estimated 5% Mica Content				

GRAIN SIZE DISTRIBUTION

Medley Farms RI/FS
Gaffney, S.C.
SEC JOB No. G-8026



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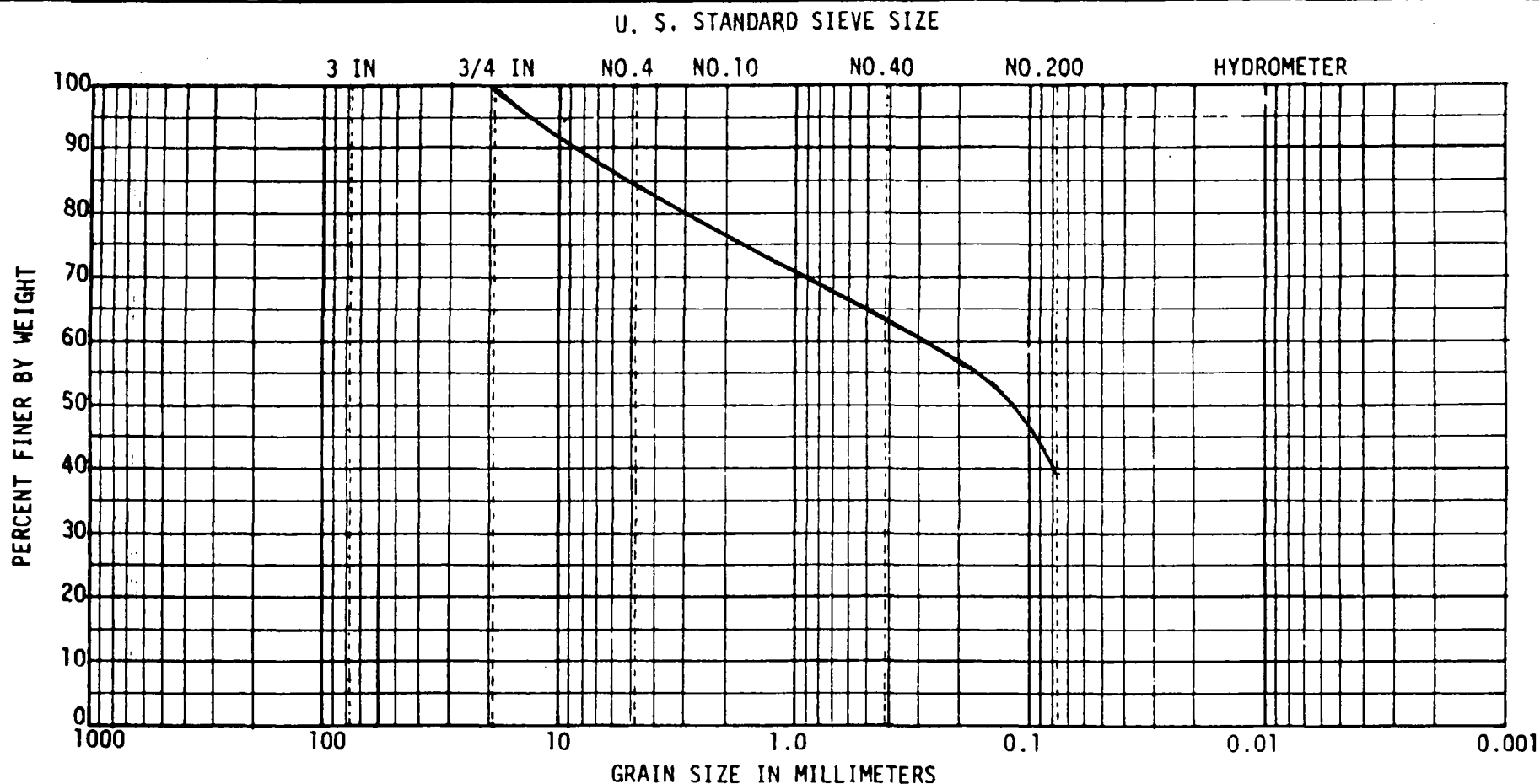
COBBLES	GRAVEL		SAND			SILT OR CLAY
	Coarse	Fine	Coarse	Medium	Fine	

SAMPLE	DEPTH	CLASSIFICATION	NAT WC	LL	PL	PI
SW 101	9.0-11.0'	Dark Tan F/M Sandy SILT				
S2		w/ MICA				
		(ML)				
		Estimated 20% Mica Content				

GRAIN SIZE DISTRIBUTION

Medley Rams RI/FS
Gaffney, S.C.
SEC JOB No. G-8026





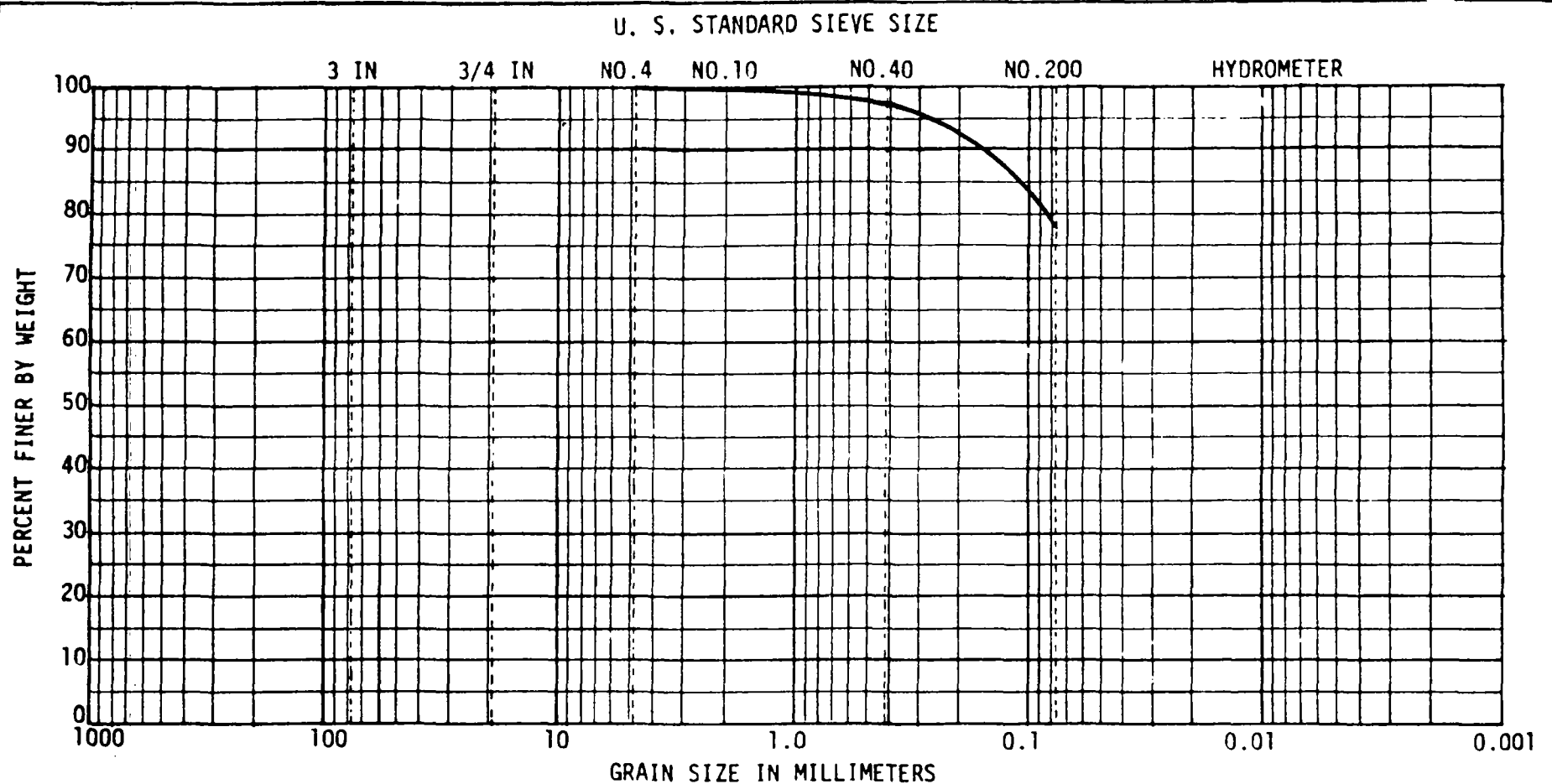
COBBLES	GRAVEL		SAND			SILT OR CLAY
	Coarse	Fine	Coarse	Medium	Fine	

SAMPLE	DEPTH(ft)	CLASSIFICATION	NAT WC	LL	PL	PI
SW 101	24.0-29.1	Light Grey Fine Sandy SILT	13.6			
S5, S6		w/ Mica				
		(ML)				
		Estimated 5% Mica Content				

GRAIN SIZE DISTRIBUTION

Medley Farms RI/FS
 Gaffney, S.C.
 SEC JOB No. G-8026





COBBLES	GRAVEL		SAND			SILT OR CLAY
	Coarse	Fine	Coarse	Medium	Fine	

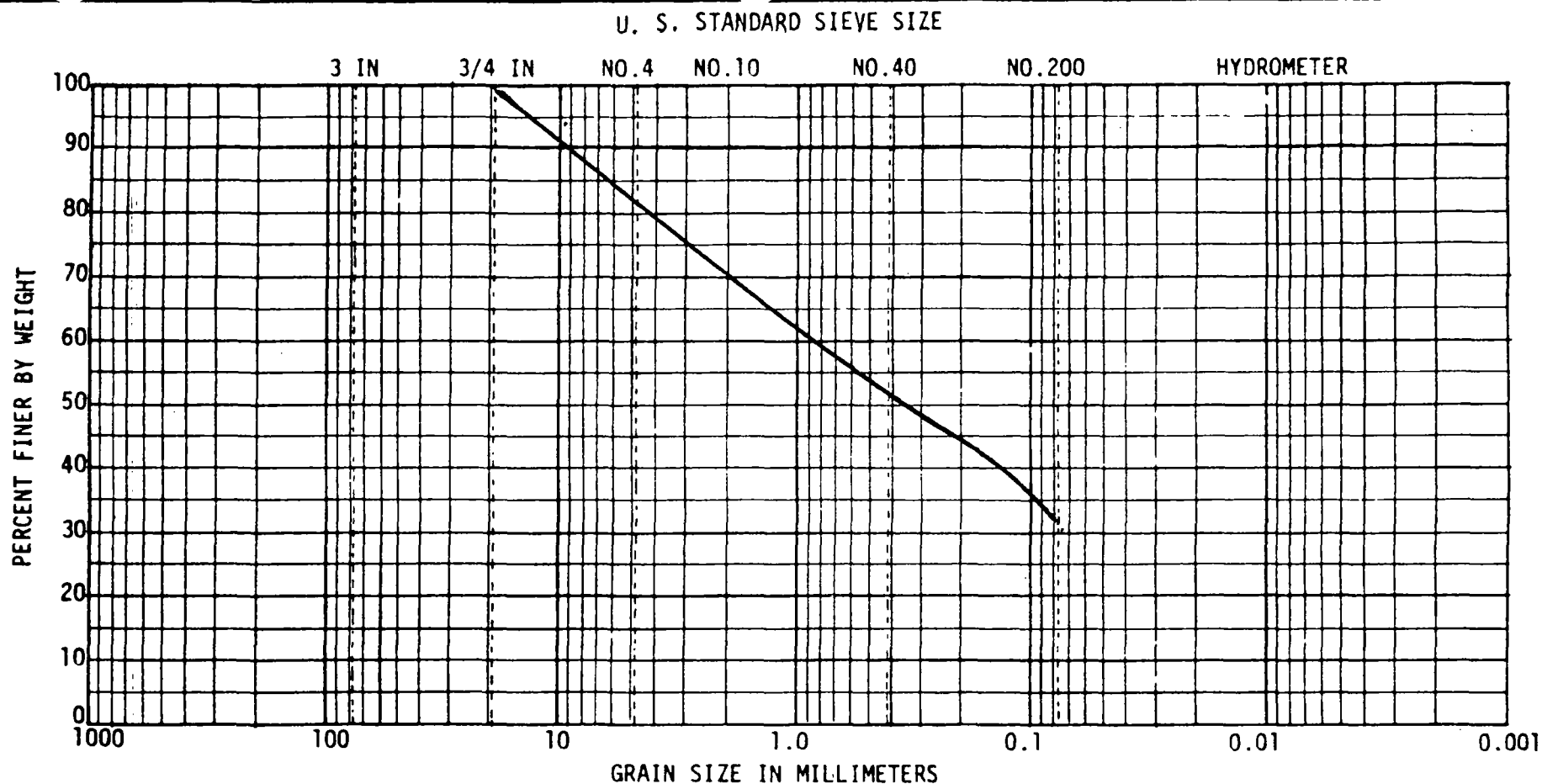
SAMPLE	DEPTH	CLASSIFICATION	NAT WC	LL	PL	PI
SH 102	9.0-11.0'	Tan Fine Sandy Slightly	15.5			
S2		Clayey SILT				
		(ML)				
		No apparent Mica Content				

GRAIN SIZE DISTRIBUTION

Medley Farms RI/FS
Gaffney, S.C.
SEC JOB No. G-8026



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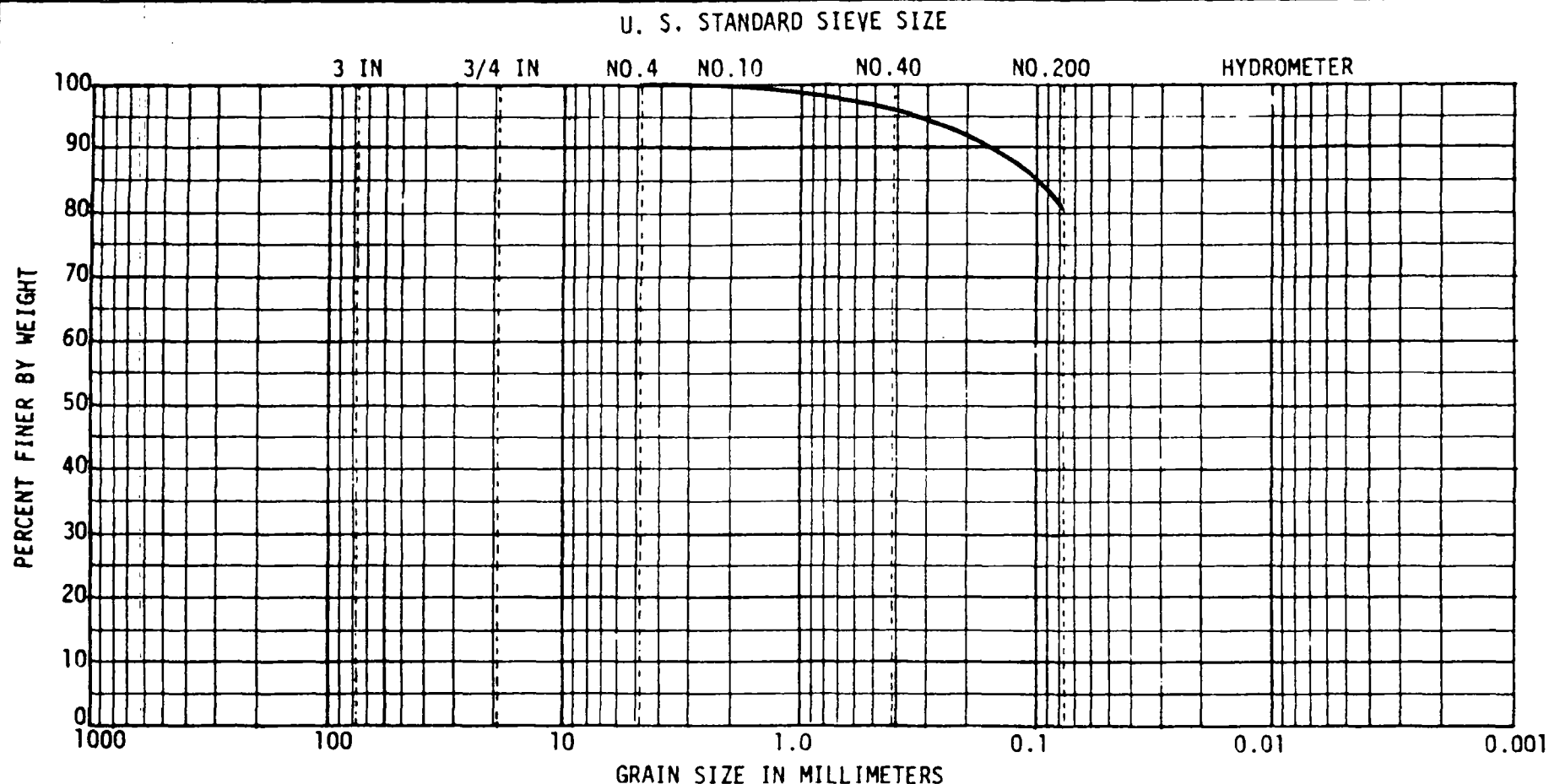
COBBLES		GRAVEL		SAND			SILT OR CLAY
		Coarse	Fine	Coarse	Medium	Fine	
SAMPLE	DEPTH(ft)	CLASSIFICATION		NAT WC	LL	PL	PI
SH 102	39.0-48.0	Dark Tan Fine Sandy SILT					
S8, S9		w/ Mica and gravel					
S10		(ML)					
		Estimated 40% Mica Content					

GRAIN SIZE DISTRIBUTION

Medley Farms RI/FS
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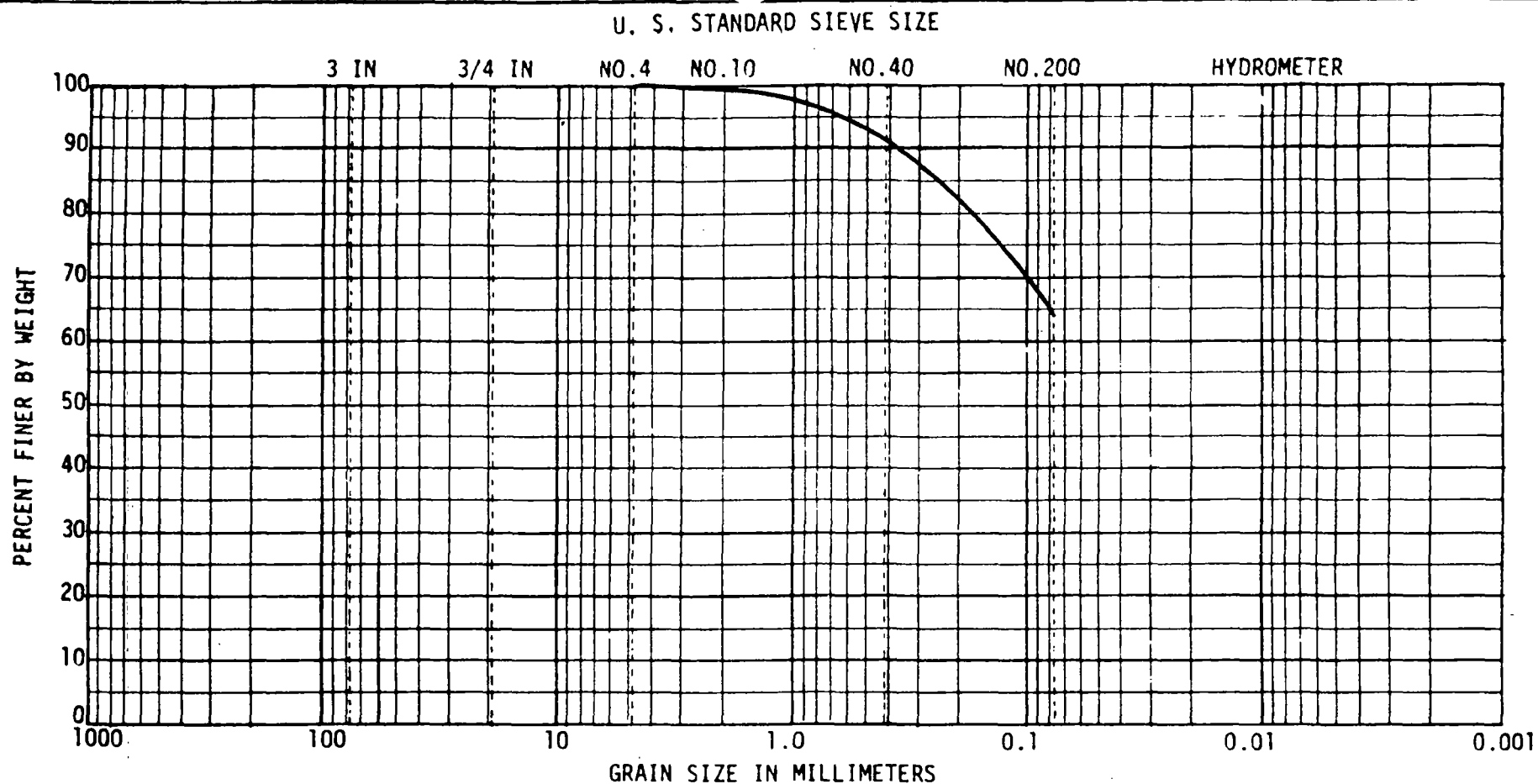


GRAIN SIZE DISTRIBUTION

Medley Farms RI/FS
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COBBLES	GRAVEL		SAND			SILT OR CLAY
	Coarse	Fine	Coarse	Medium	Fine	

SAMPLE	DEPTH (ft)	CLASSIFICATION	NAT WC	LL	PL	PI
SW 103	39.0-45.0	Tan F/M Sandy Clayey SILT				
S8, S9		(ML)				
		Estimated 5% Mica Content				

GRAIN SIZE DISTRIBUTION

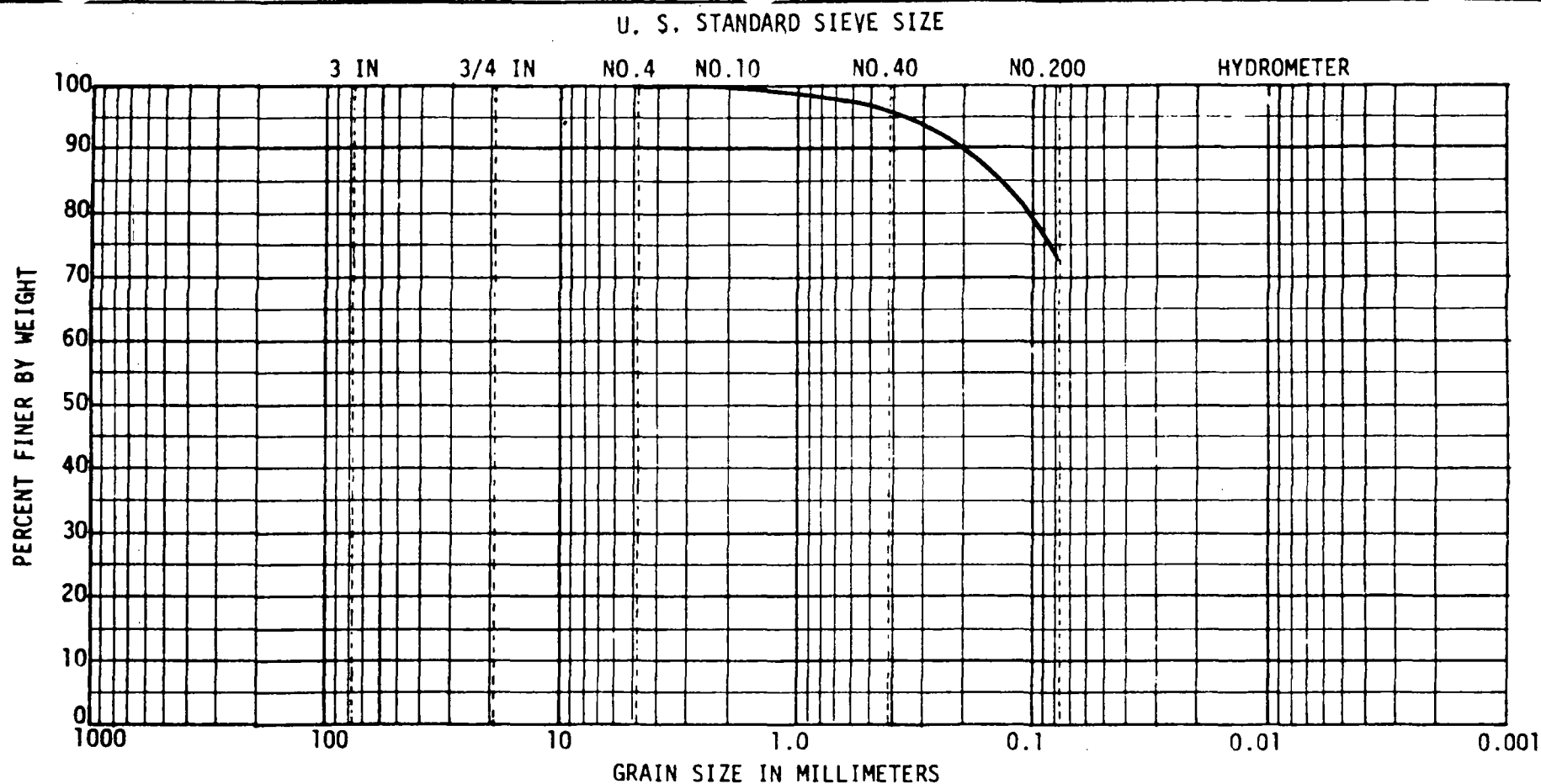
Medley Farms RI/FS

Gaffney, S.C.

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COBBLES	GRAVEL		SAND			SILT OR CLAY
	Coarse	Fine	Coarse	Medium	Fine	

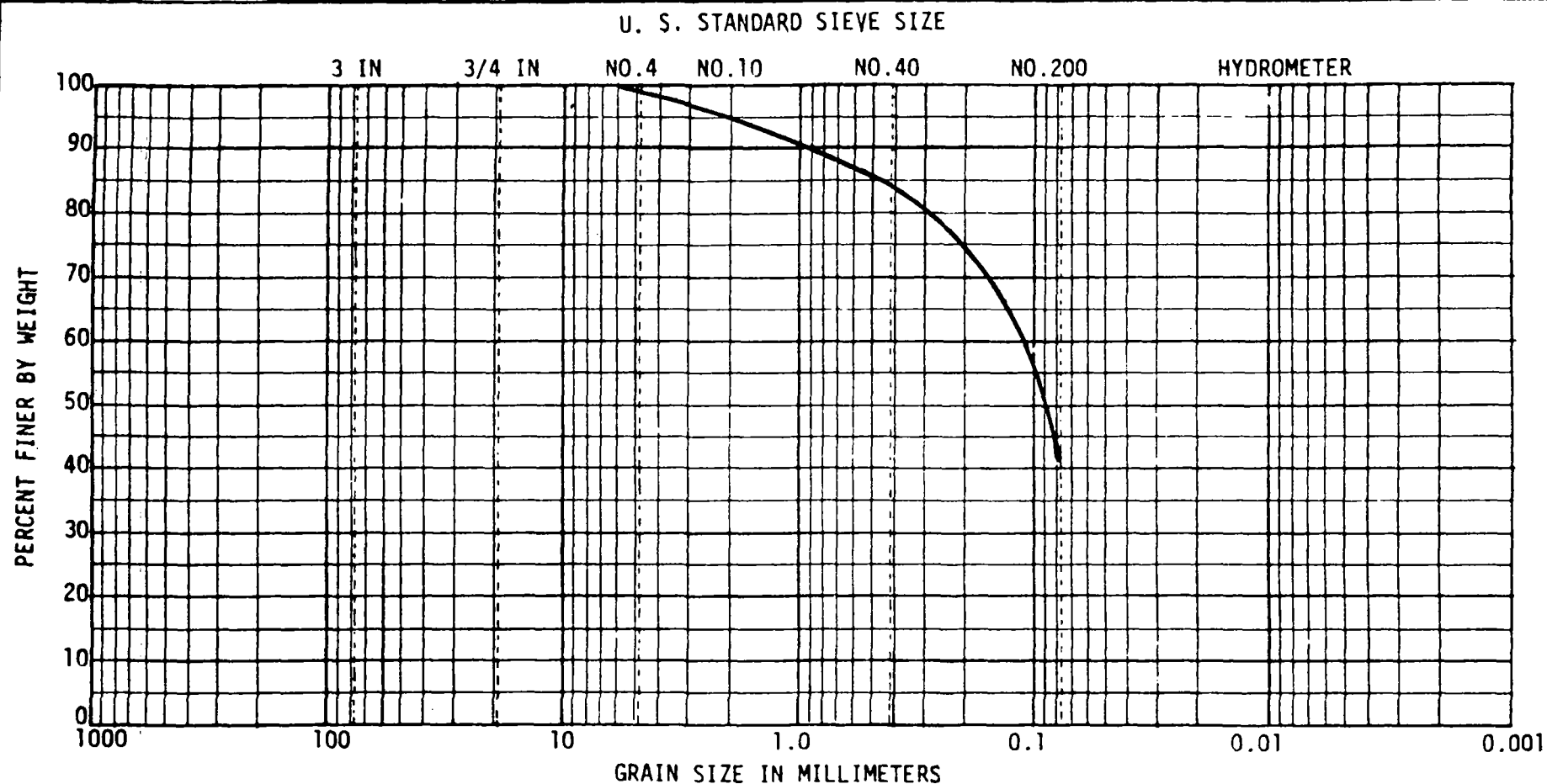
SAMPLE	DEPTH	CLASSIFICATION	NAT WC	LL	PL	PI
SH 104	9.0-11.0'	Light Tan F/M Sandy Slightly	14.3			
S2		Clayey SILT				
		(ML)				
		No Apparent Mica Content				

GRAIN SIZE DISTRIBUTION

Medley Farms RI/FS
Gaffney, S.C.
SEC JOB No. G-8026



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COBBLES	GRAVEL		SAND			SILT OR CLAY
	Coarse	Fine	Coarse	Medium	Fine	

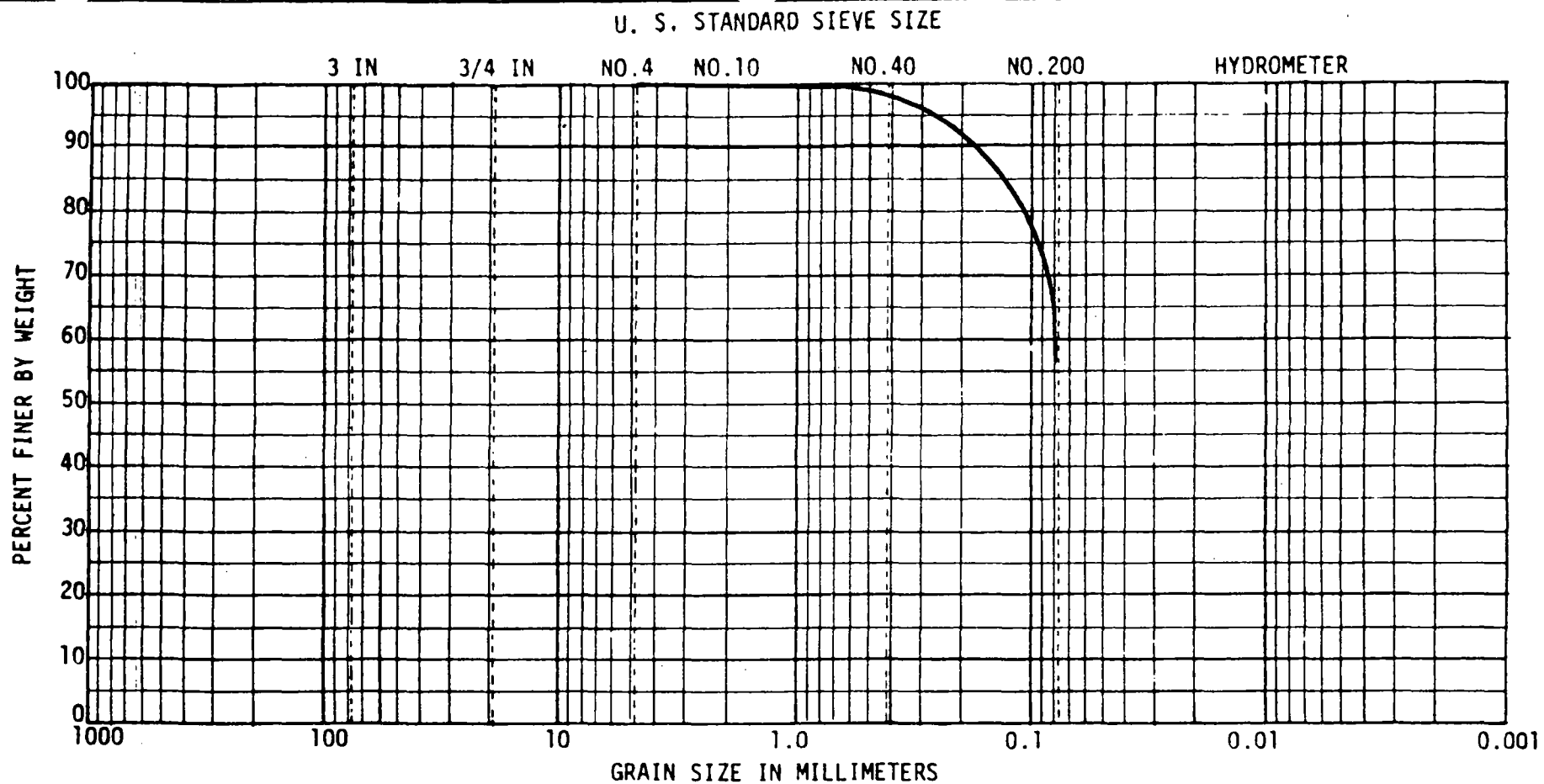
SAMPLE	DEPTH (ft)	CLASSIFICATION	NAT WC	LL	PL	PI
SH 106	19.0-26.0	Dark Gray Silty Slightly				
S4, S5		Clayey F/M SAND				
		(SM-SC)				
		Estimated 5% Mica				

GRAIN SIZE DISTRIBUTION

Medley Farms RI/FS
Gaffney, S.C.
SEC JOB No. G-8026



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COBBLES	GRAVEL		SAND			SILT OR CLAY
	Coarse	Fine	Coarse	Medium	Fine	

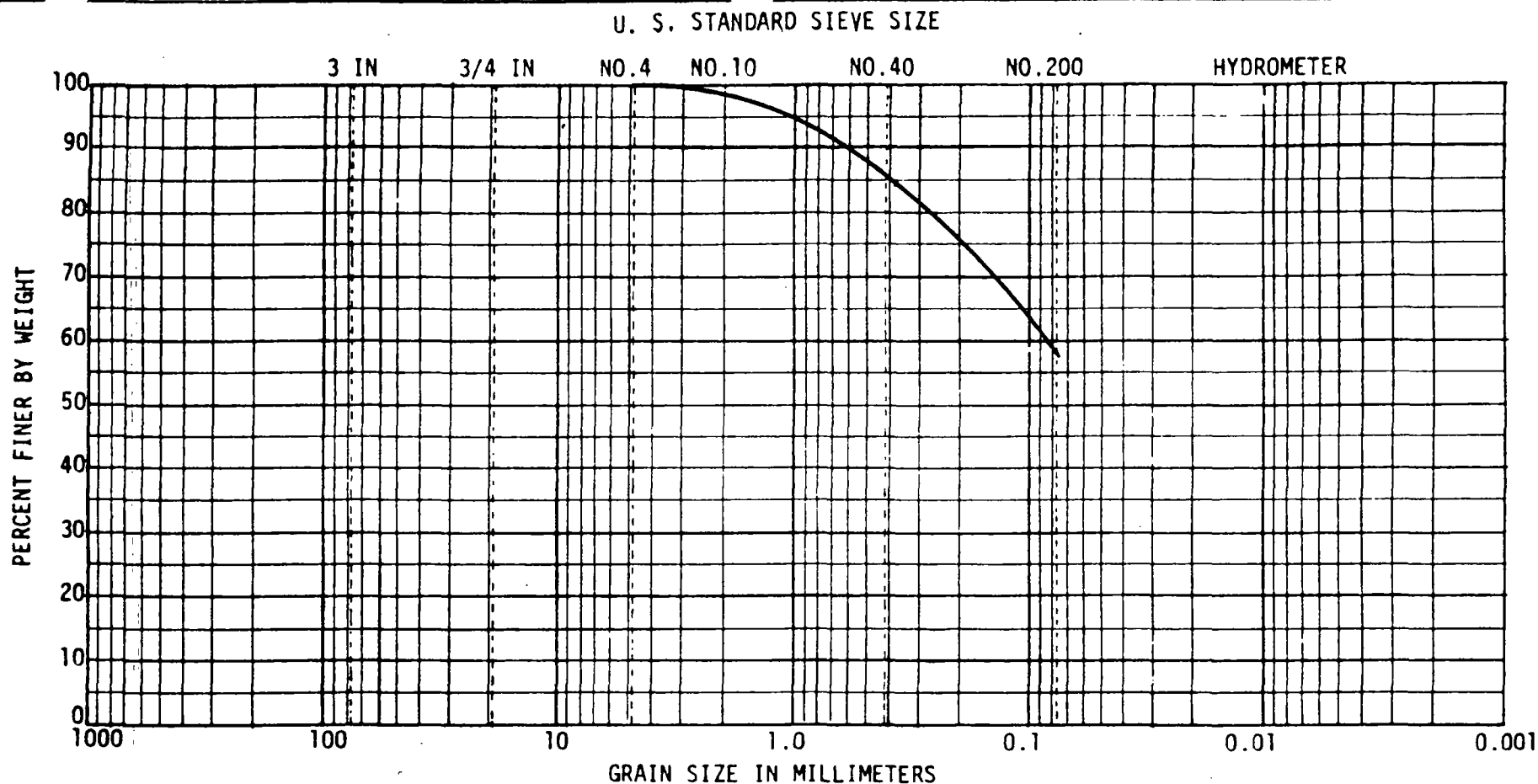
SAMPLE	DEPTH	CLASSIFICATION	NAT WC	LL	PL	PI
SH 108	3.5-5.5'	Tan F/M Sandy SILT w/ Mica	14.0	39	N/P	
SI		(ML)				
		Estimated 20% Mica Content				

GRAIN SIZE DISTRIBUTION

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SEC JOB No. G-8026



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COBBLES	GRAVEL		SAND			SILT OR CLAY
	Coarse	Fine	Coarse	Medium	Fine	

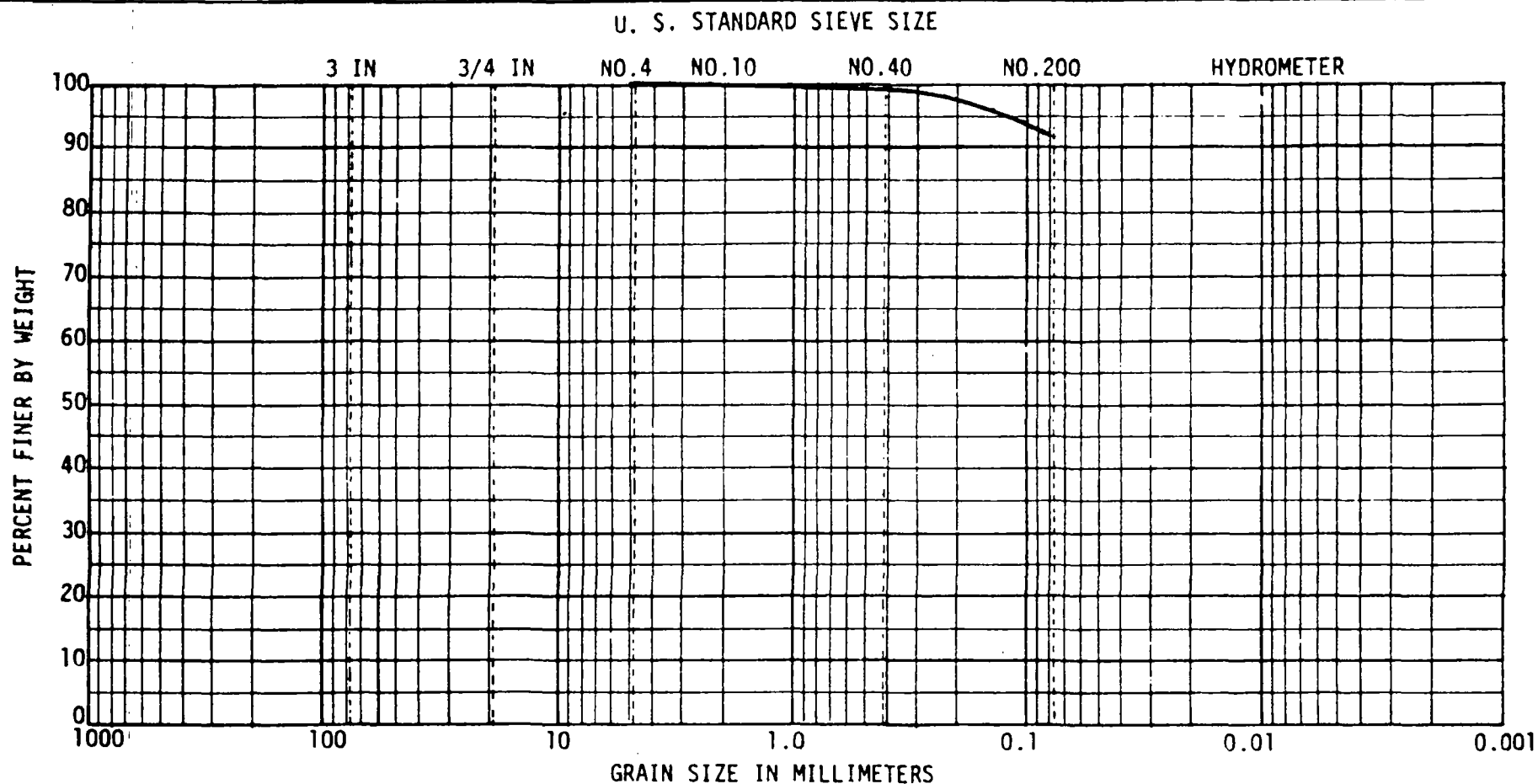
SAMPLE	DEPTH (ft)	CLASSIFICATION	NAT WC	LL	PL	PI
SW 108	13.5-20.0	Tan F/C Sandy Slightly				
S3, S4		Clayey SILT				
		(ML)				
		Estimated 5% Mica Content				

GRAIN SIZE DISTRIBUTION

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COBBLES	GRAVEL		SAND			SILT OR CLAY
	Coarse	Fine	Coarse	Medium	Fine	

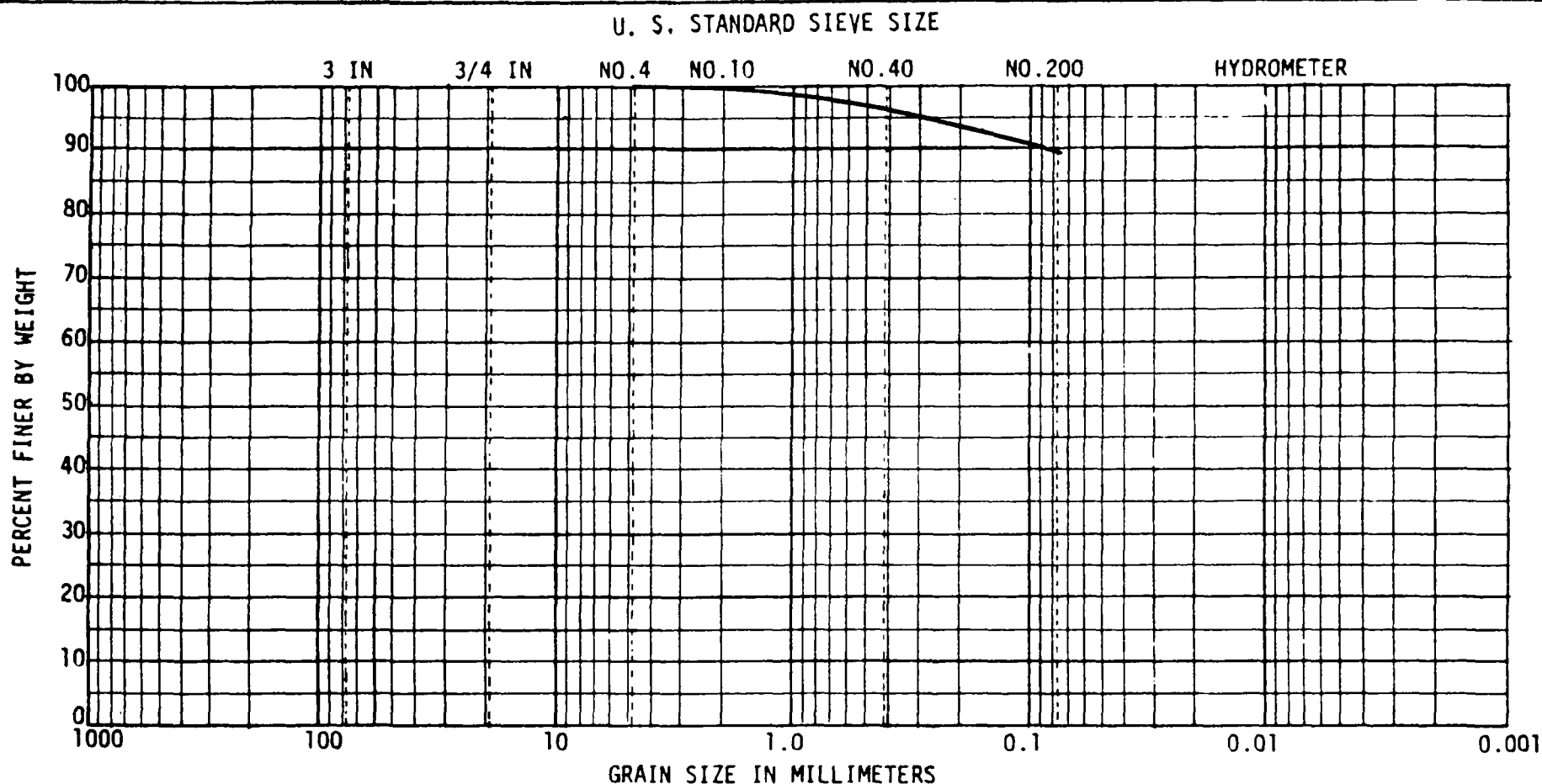
SAMPLE	DEPTH	CLASSIFICATION	NAT WC	LL	PL	PI
SW 109	9.0-11.5'	Tan Fine Sandy SILT	21.7	39	N/P	
S2, S3		(ML)				
		No Apparent Mica Content				

GRAIN SIZE DISTRIBUTION

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SEC JOB No. G-8026



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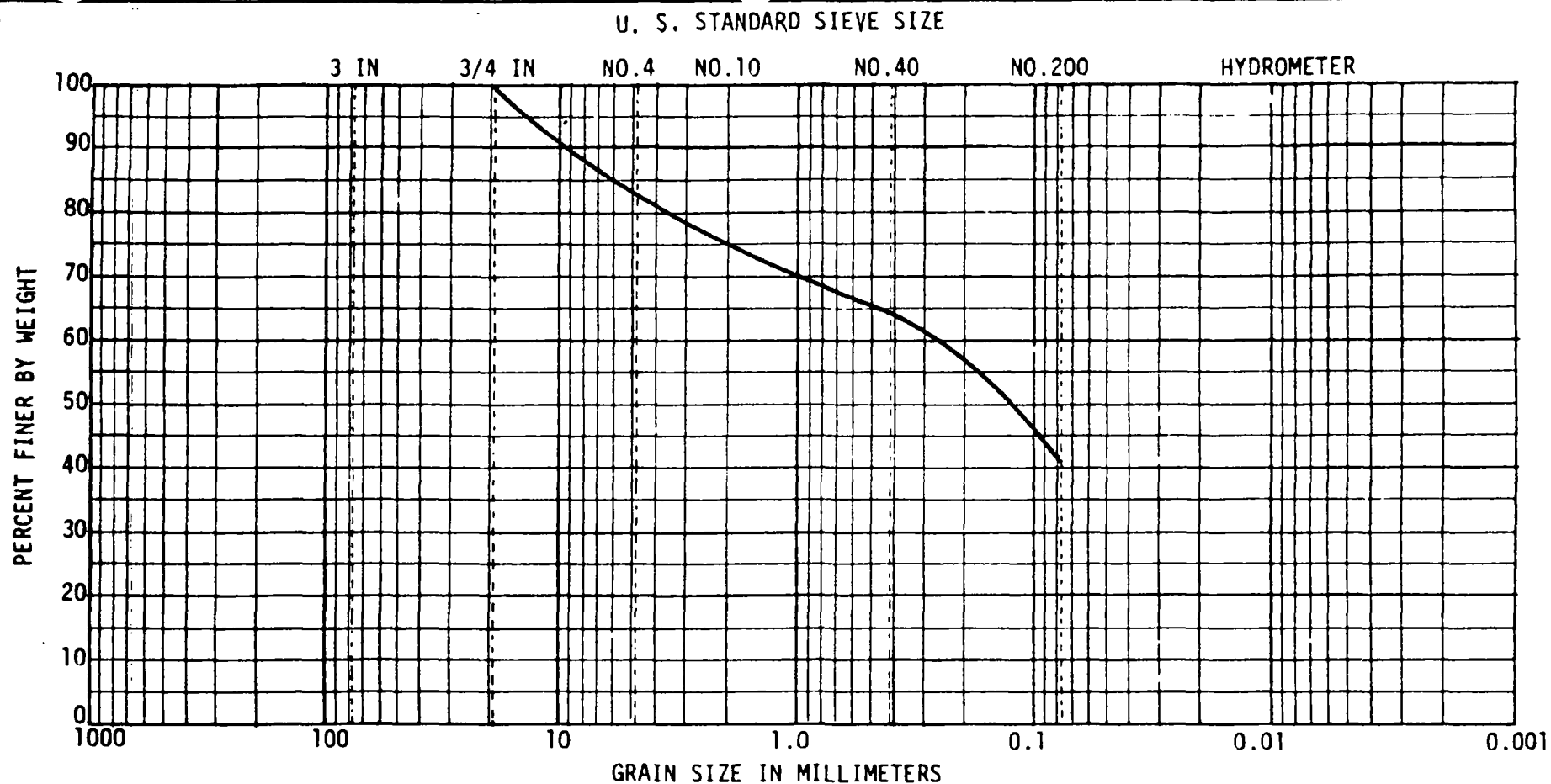
		GRAVEL		SAND			SILT OR CLAY
		Coarse	Fine	Coarse	Medium	Fine	
SAMPLE	DEPTH (ft)	CLASSIFICATION		NAT WC	LL	PL	PI
SN 109	29.0-39.5	Gray Fine Sandy Clayey SILT		13.2			
S6, S7		(ML)					
S8							
		No Apparent Mica					

GRAIN SIZE DISTRIBUTION

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Gaffney, S.C.
SEC JOB No. G-8026



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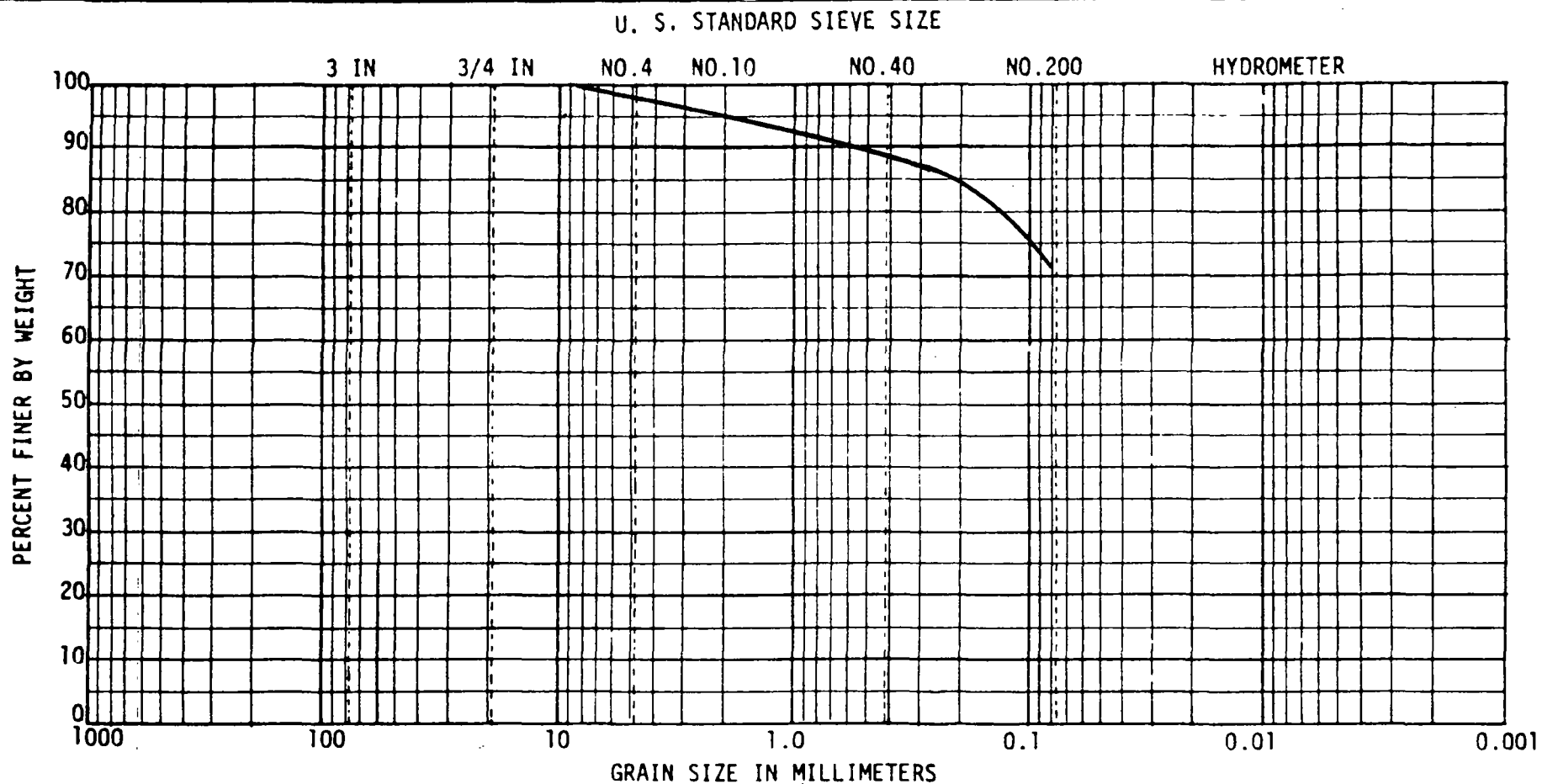
COBBLES		GRAVEL		SAND			SILT OR CLAY
		Coarse	Fine	Coarse	Medium	Fine	
SAMPLE	DEPTH(ft)	CLASSIFICATION		NAT WC	LL	PL	PI
SW 109	59.0-69.0	Grey Fine Sandy SILT w/ gravel					
S12, S13							
S14		(ML)					
		No Apparent Mica Content					

GRAIN SIZE DISTRIBUTION

Medley Farms RI/FS
Gaffney, S.C.
SEC JOB No. G-8026



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COBBLES	GRAVEL		SAND			SILT OR CLAY
	Coarse	Fine	Coarse	Medium	Fine	

SAMPLE	DEPTH (ft)	CLASSIFICATION	NAT WC	LL	PL	PI
SW 110	23.5-30.5	Tan F/C Sandy Slighty	15.3			
S5, S6		Clayey SILT				
		(ML)				
		No Apparent Mica Content				

GRAIN SIZE DISTRIBUTION

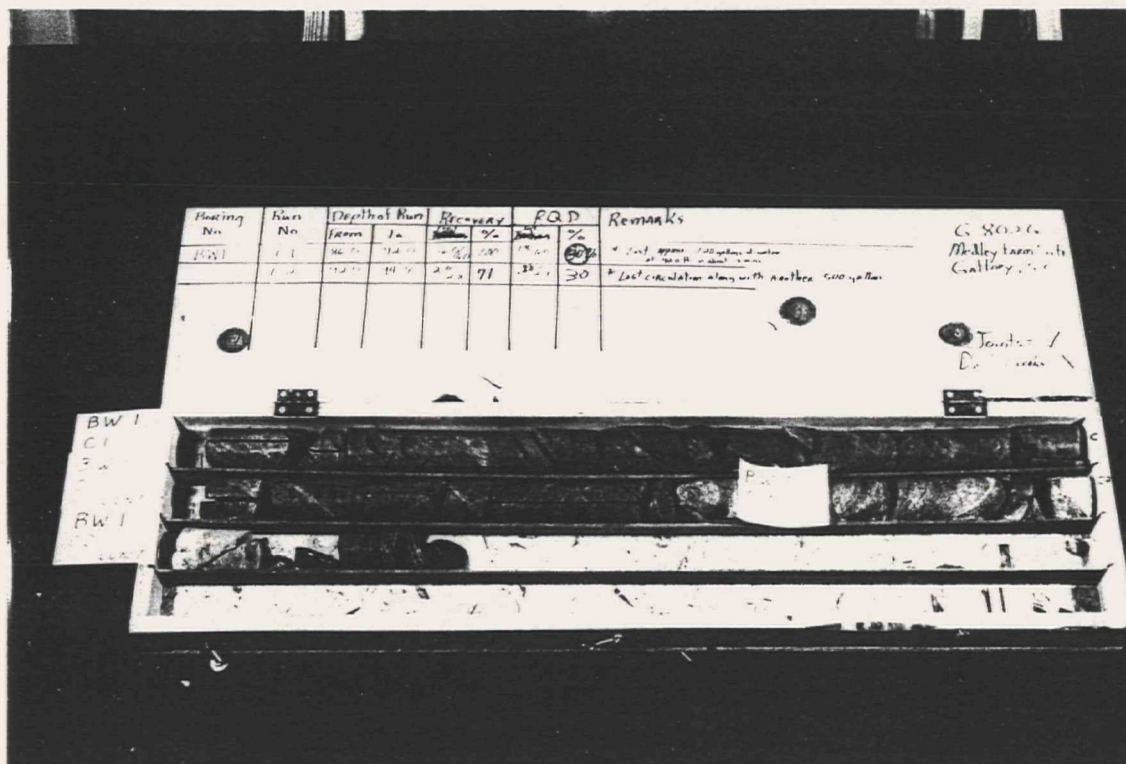
Medley Farms RI/FS
Gaffney, S.C.
SEC JOB No. G-8026



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APPENDIX K
ROCK CORE PHOTOGRAPHY

ROCK CORE PHOTOGRAPHY



Note: All core oriented top (right) to bottom (left).

PROJECT: Medley Farm RI
LOCATION: Gaffney, South Carolina
CLIENT: Medley Farm Steering Committee
CONTRACTOR: Environmental Drilling and Services for Phase I
Atlanta Testing and Engineering for Phase II

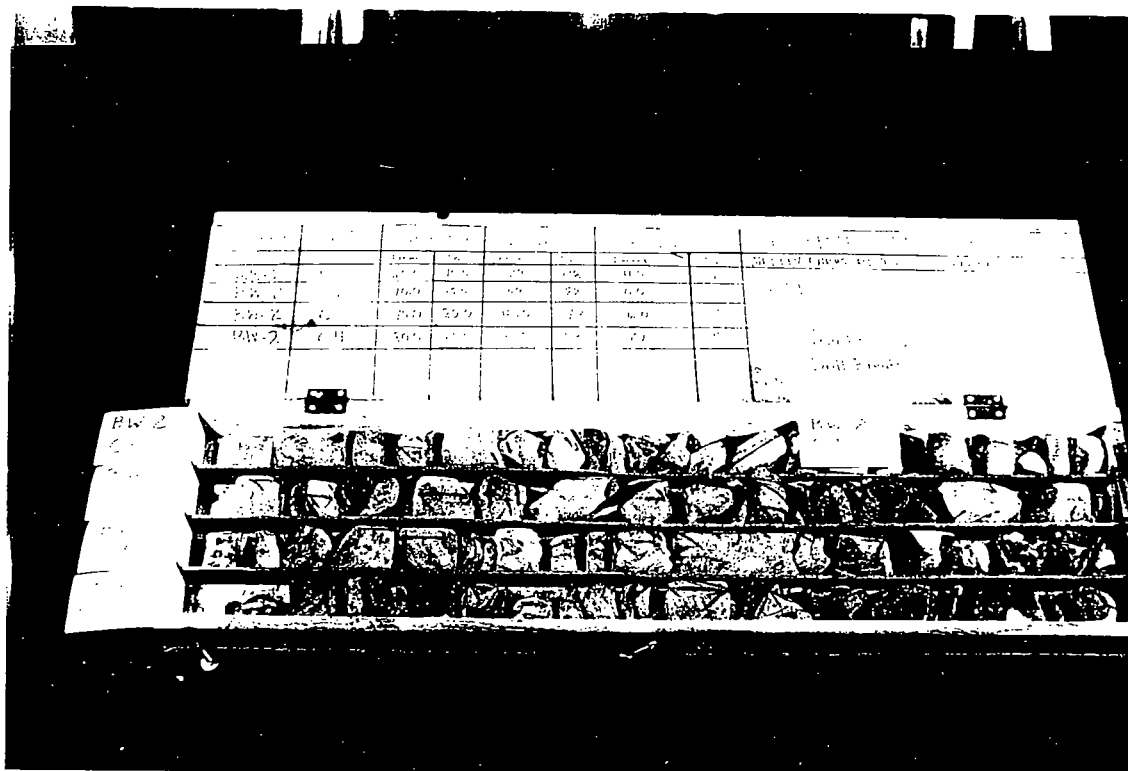
JOB NO.: G-8026
DATE CORED: 6/1-14/90
PHOTOGRAPHED BY: E. Olson

CORE BARREL TYPE: HQ - Split Inner Barrel

CORE DIAMETER: 3.8 in.

BORING NO.	RUN NO.	DEPTH OF RUN (FT.)		RECOVERY		RQD	
		FROM:	TO:	INCHES	%	INCHES	%
BW 1	C1 C2	86 92	92 94.8	72 24	100 71	21.6 0	30 0

ROCK CORE PHOTOGRAPHY



Note: All core oriented top (right) to bottom (left).

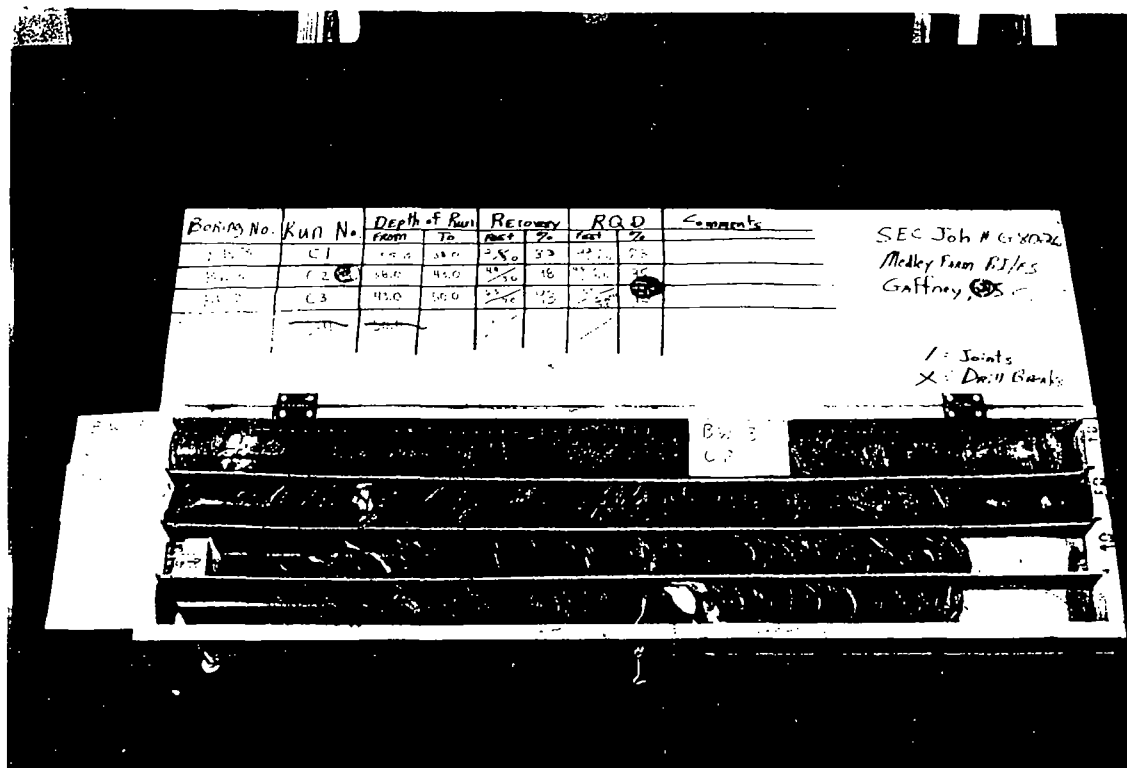
PROJECT: Medley Farm RI
LOCATION: Gaffney, South Carolina
CLIENT: Medley Farm Steering Committee
CONTRACTOR: Environmental Drilling and Services for Phase I
Atlanta Testing and Engineering for Phase II

JOB NO.: G-8026
DATE CORED: 7/25/89
PHOTOGRAPHED BY: E. Olson

CORE BARREL TYPE: HQ - Split Inner Barrel CORE DIAMETER: 3.8 in.

BORING NO.	RUN NO.	DEPTH OF RUN (FT.)		RECOVERY		RQD	
		FROM:	TO:	INCHES	%	INCHES	%
BW 2	C1	65	70	28.8	48	4.5	1
	C2	70	75	99.2	82	4.0	1
	C3	75	80	43.2	73	6.0	1
	C4	80	85	31.2	53	0	0

ROCK CORE PHOTOGRAPHY



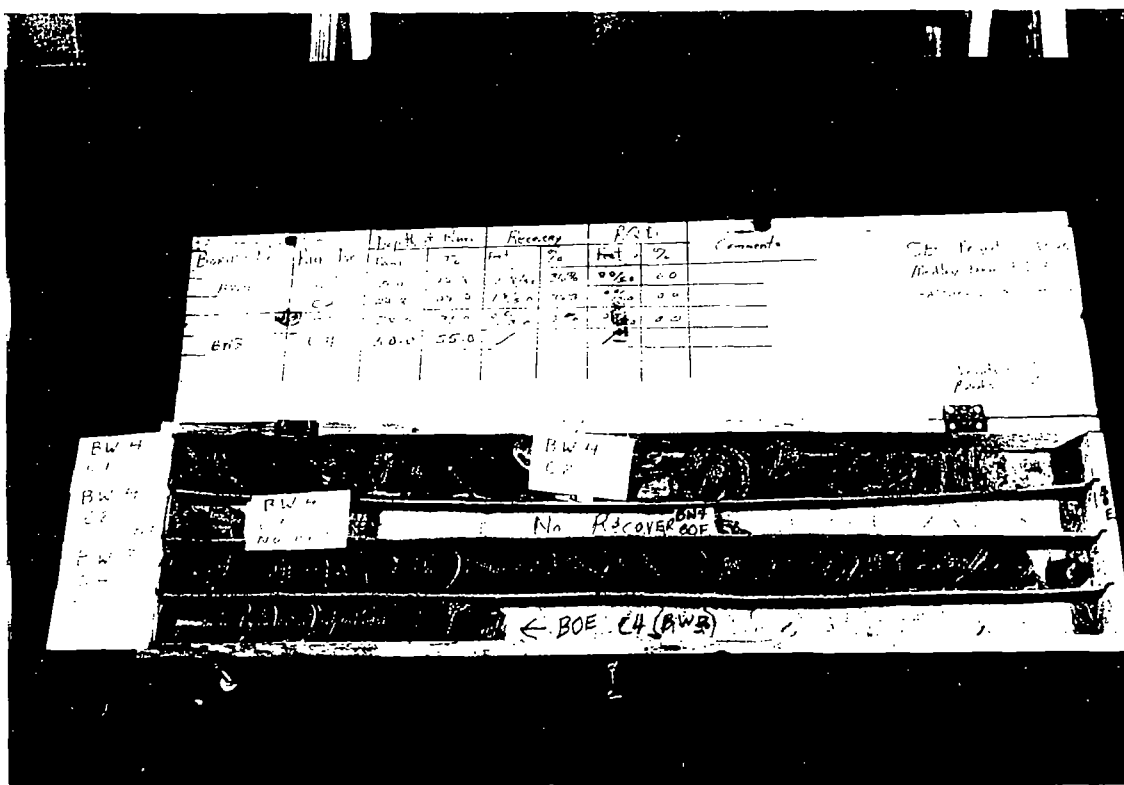
Note: All core oriented top (right) to bottom (left).

PROJECT: <u>Medley Farm RI</u>	JOB NO.: <u>G-8026</u>
LOCATION: <u>Gaffney, South Carolina</u>	DATE CORED: <u>7/14-21/90</u>
CLIENT: <u>Medley Farm Steering Committee</u>	
CONTRACTOR: <u>Environmental Drilling and Services for Phase I</u> <u>Atlanta Testing and Engineering for Phase II</u>	PHOTOGRAPHED BY: <u>E. Olson</u>

CORE BARREL TYPE: <u>HQ - Split Inner Barrel</u>	CORE DIAMETER: <u>3.8 in.</u>
--	-------------------------------

BORING NO.	RUN NO.	DEPTH OF RUN (FT.)		RECOVERY		RQD	
		FROM:	TO:	INCHES	%	INCHES	%
BW 3	C1	35	38	30	83	21.9	73
	C2	38	43	58.8	98	55.86	95
	C3	43	50	78	93	78	93

ROCK CORE PHOTOGRAPHY



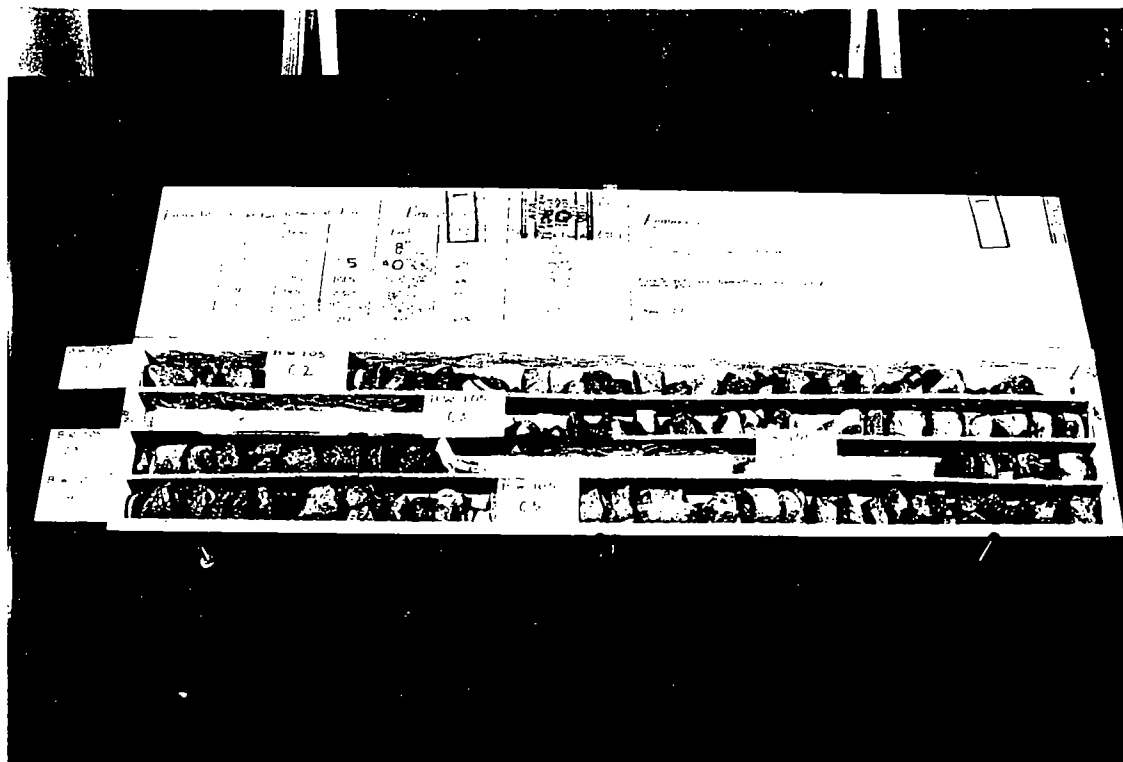
Note: All core oriented top (right) to bottom (left).

PROJECT: <u>Medley Farm RI</u>	JOB NO.: <u>G-8026</u>
LOCATION: <u>Gaffney, South Carolina</u>	DATE CORED: <u>7/13-19/90</u>
CLIENT: <u>Medley Farm Steering Committee</u>	PHOTOGRAPHED BY: <u>E. Olson</u>
CONTRACTOR: <u>Environmental Drilling and Services for Phase I</u> <u>Atlanta Testing and Engineering for Phase II</u>	

CORE BARREL TYPE: <u>HQ - Split Inner Barrel</u>	CORE DIAMETER: <u>3.8 in.</u>
--	-------------------------------

BORING NO.	RUN NO.	DEPTH OF RUN (FT.)		RECOVERY		RQD	
		FROM:	TO:	INCHES	%	INCHES	%
BW 4	C1	18	22.8	21.6	36	0	0
	C2	22.8	27.9	21.6	36	0	0
	C3	27.9	31	0	0	0	0
BW 3	C4	50	55	58.8	98	58.8	98

ROCK CORE PHOTOGRAPHY



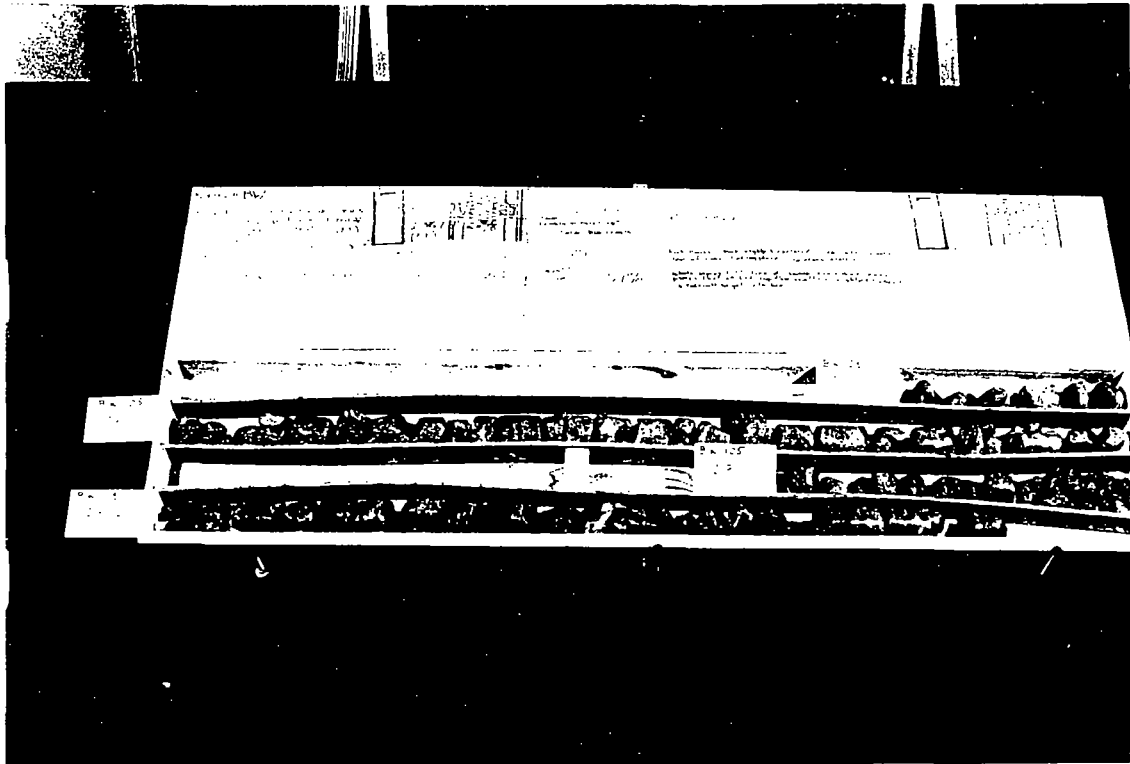
Note: All core oriented top (right) to bottom (left).

PROJECT: <u>Medley Farm RI</u>	JOB NO.: <u>G-8026</u>
LOCATION: <u>Gaffney, South Carolina</u>	DATE CORED: <u>9/14-17/90</u>
CLIENT: <u>Medley Farm Steering Committee</u>	
CONTRACTOR: <u>Environmental Drilling and Services for Phase I</u> <u>Atlanta Testing and Engineering for Phase II</u>	PHOTOGRAPHED BY: <u>E. Olson</u>

CORE BARREL TYPE: <u>HQ - Split Inner Barrel</u>	CORE DIAMETER: <u>3.8 in.</u>
--	-------------------------------

BORING NO.	RUN NO.	DEPTH OF RUN (FT.)		RECOVERY		RQD	
		FROM:	TO:	INCHES	%	INCHES	%
BW 105	C1	89	90	8	67	0	0
	C2	90	95	40	67	0	0
	C3	95	101.5	53	68	0	0
	C4	101.5	106.3	34	59	0	0
	C5	106.3	110.2	35	75	0	0

ROCK CORE PHOTOGRAPHY

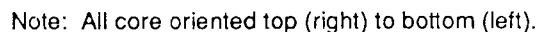


Note: All core oriented top (right) to bottom (left).

PROJECT: <u>Medley Farm RI</u>	JOB NO.: <u>G-8026</u>
LOCATION: <u>Gaffney, South Carolina</u>	DATE CORED: <u>9/14-17/90</u>
CLIENT: <u>Medley Farm Steering Committee</u>	
CONTRACTOR: <u>Environmental Drilling and Services for Phase I</u> <u>Atlanta Testing and Engineering for Phase II</u>	PHOTOGRAPHED BY: <u>E. Olson</u>

CORE BARREL TYPE: HQ - Split Inner Barrel CORE DIAMETER: 3.8 in.

BORING NO.	RUN NO.	DEPTH OF RUN (FT.)		RECOVERY		RQD	
		FROM:	TO:	INCHES	%	INCHES	%
BW 105	C6	110.3	120.37	72	60	0	0
	C7	120.37	129.5	60	55	0	0

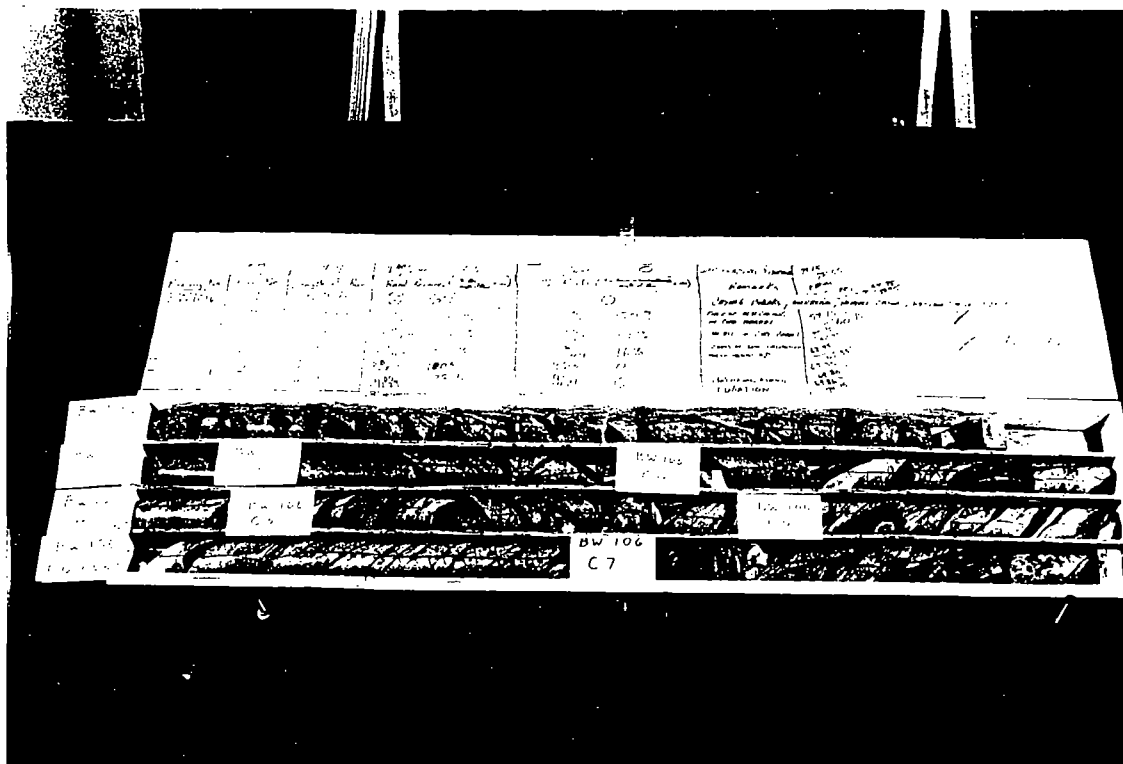


JOB NO.: G-8026
DATE CORED: 9/14-17/90
PHOTOGRAPHED BY: E. Olson

CORE BARREL TYPE: HQ - Split Inner Barrel CORE DIAMETER: 3.8 in.

BORING NO.	RUN NO.	DEPTH OF RUN (FT.)		RECOVERY		RQD	
		FROM:	TO:	INCHES	%	INCHES	%
BW 105	C8	129.5	139.12	116.04	100	110.5	91

ROCK CORE PHOTOGRAPHY



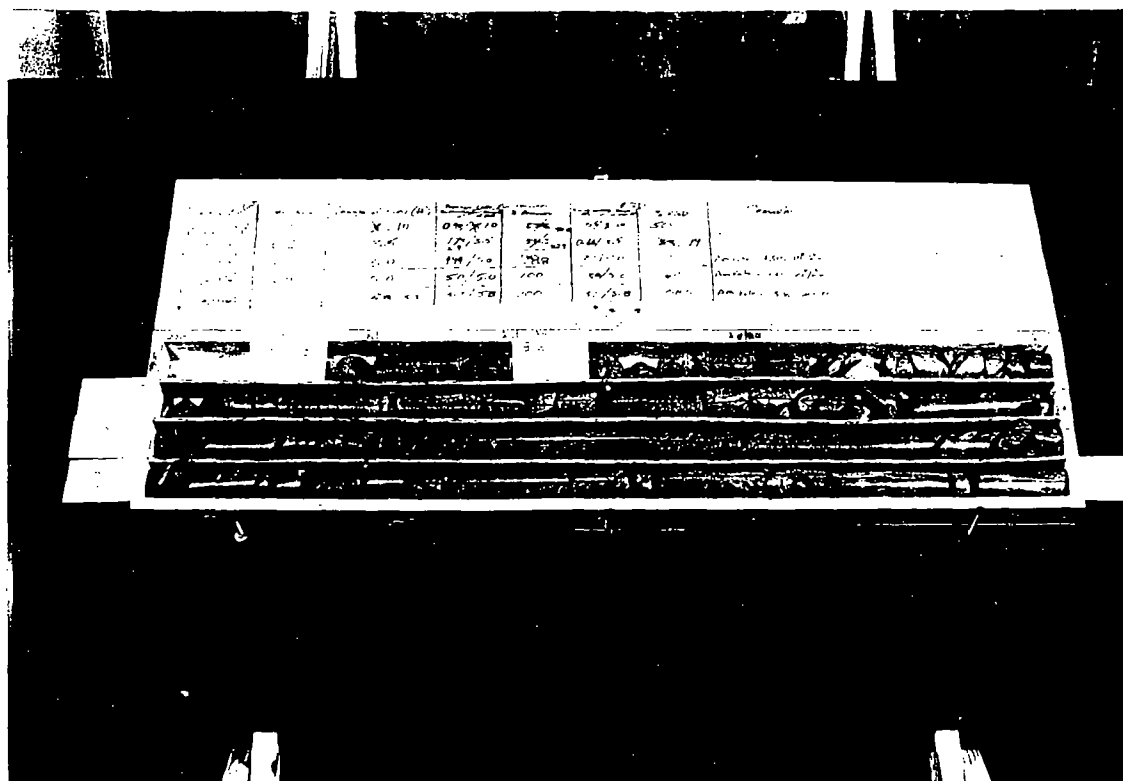
Note: All core oriented top (right) to bottom (left).

PROJECT: <u>Medley Farm RI</u>	JOB NO.: <u>G-8026</u>
LOCATION: <u>Gaffney, South Carolina</u>	DATE CORED: <u>9/24-27/90</u>
CLIENT: <u>Medley Farm Steering Committee</u>	
CONTRACTOR: <u>Environmental Drilling and Services for Phase I</u> <u>Atlanta Testing and Engineering for Phase II</u>	PHOTOGRAPHED BY: <u>E. Olson</u>

CORE BARREL TYPE: <u>HQ - Split Inner Barrel</u>	CORE DIAMETER: <u>3.8 in.</u>
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BORING NO.	RUN NO.	DEPTH OF RUN (FT.)		RECOVERY		RQD	
		FROM:	TO:	INCHES	%	INCHES	%
BW 106	C1	54.75	59.75	38.4	64	0	0
	C2	59.75	60.75	12	100	6	0
	C3	60.75	62.45	20.4	100	12	59
	C4	62.45	67.35	34.8	57	5.6	16
	C5	67.35	69.86	30.0	100	0	0
	C6	69.86	74.15	48	93	0	0
	C7	74.15	78.55	28.8	54	0	0

ROCK CORE PHOTOGRAPHY



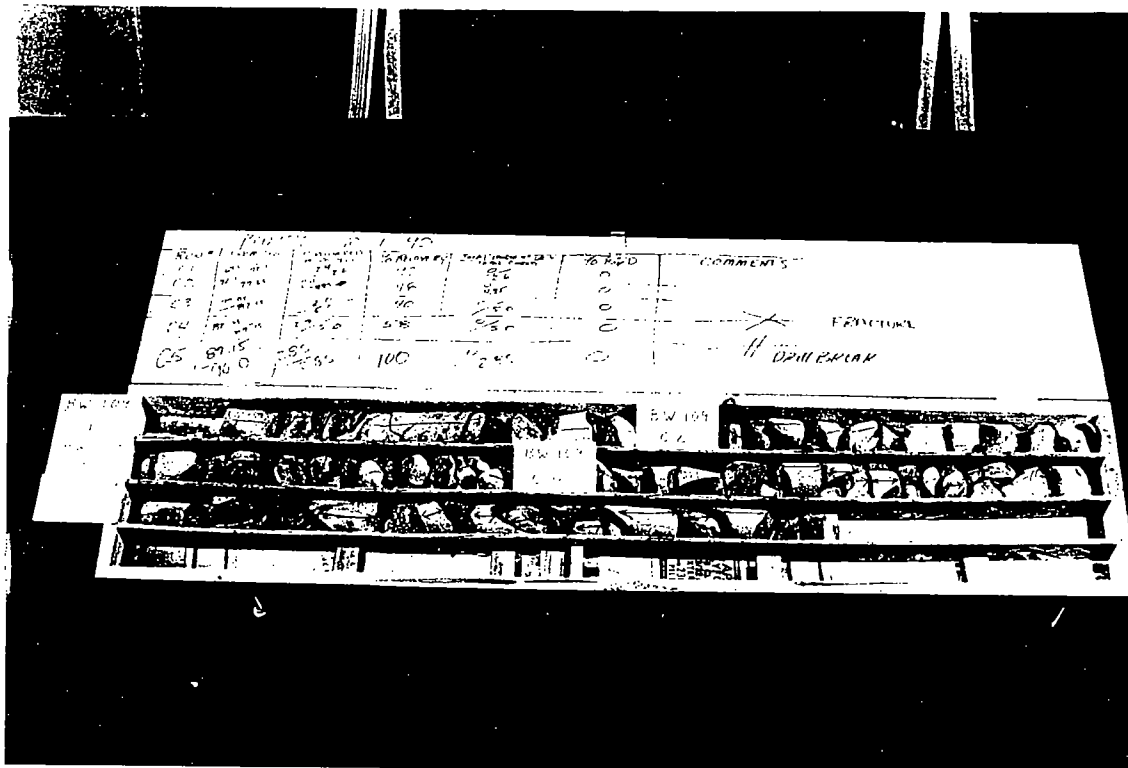
Note: All core oriented top (right) to bottom (left).

PROJECT: <u>Medley Farm RI</u>	JOB NO.: <u>G-8026</u>
LOCATION: <u>Gaffney, South Carolina</u>	DATE CORED: <u>9/14, 17/90</u>
CLIENT: <u>Medley Farm Steering Committee</u>	
CONTRACTOR: <u>Environmental Drilling and Services for Phase I</u> <u>Atlanta Testing and Engineering for Phase II</u>	PHOTOGRAPHED BY: <u>E. Olson</u>

CORE BARREL TYPE: HQ - Split Inner Barrel CORE DIAMETER: 3.8 in.

BORING NO.	RUN NO.	DEPTH OF RUN (FT.)		RECOVERY		RQD	
		FROM:	TO:	INCHES	%	INCHES	%
BW 108	C1	73.8	74.89	10.8	90	5.4	50
	C2	74.8	78.3	34.8	82.9	6.6	19
	C3	78.3	83.3	59.3	42	24.9	42
	C4	83.3	88.3	60	100	36	60
	C5	88.3	93.6	63.9	100	37.2	58.5

ROCK CORE PHOTOGRAPHY



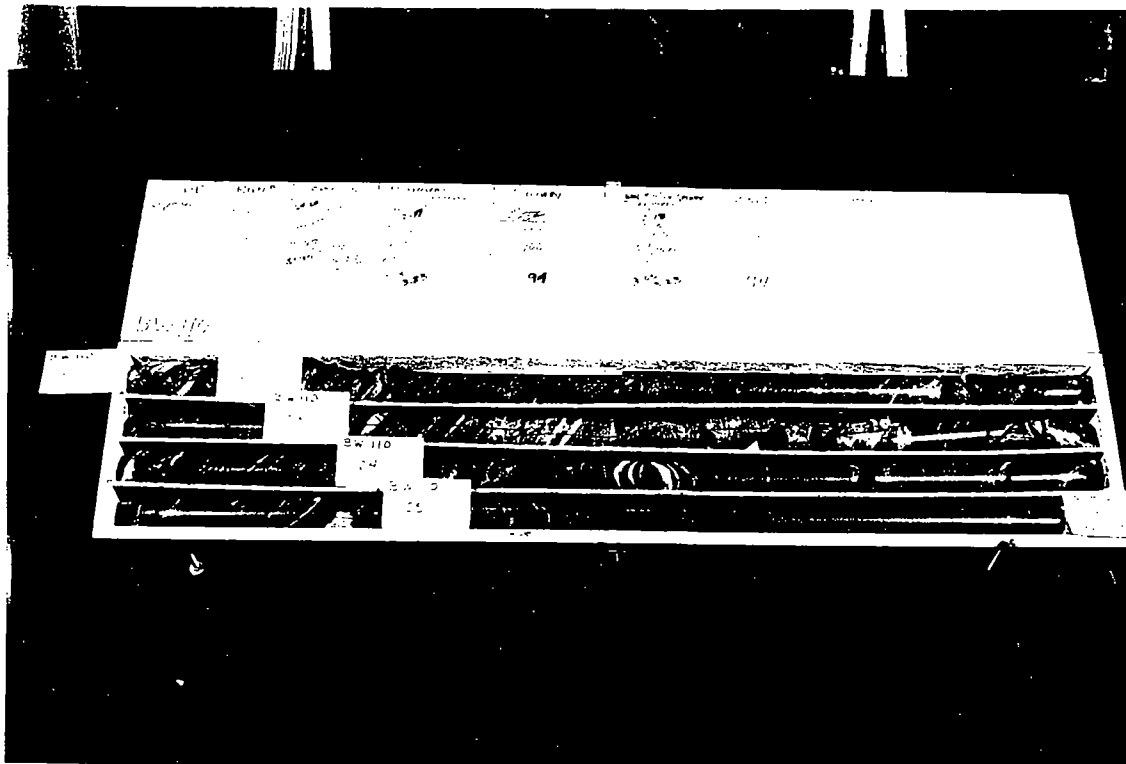
Note: All core oriented top (right) to bottom (left).

PROJECT: <u>Medley Farm RI</u>	JOB NO.: <u>G-8026</u>
LOCATION: <u>Gaffney, South Carolina</u>	DATE CORED: <u>10/11/90</u>
CLIENT: <u>Medley Farm Steering Committee</u>	
CONTRACTOR: <u>Environmental Drilling and Services for Phase I</u> <u>Atlanta Testing and Engineering for Phase II</u>	PHOTOGRAPHED BY: <u>E. Olson</u>

CORE BARREL TYPE: <u>HQ - Split Inner Barrel</u>	CORE DIAMETER: <u>3.8 in.</u>
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BORING NO.	RUN NO.	DEPTH OF RUN (FT.)		RECOVERY		RQD	
		FROM:	TO:	INCHES	%	INCHES	%
BW 109	C1	69.5	72.1	28.8	92	0	0
	C2	72.1	77.05	28.8	48	0	0
	C3	77.05	82.15	24.0	40	0	0
	C4	82.15	87.15	34.8	58	0	0
	C5	87.15	90.0	24.0	70	0	0

ROCK CORE PHOTOGRAPHY



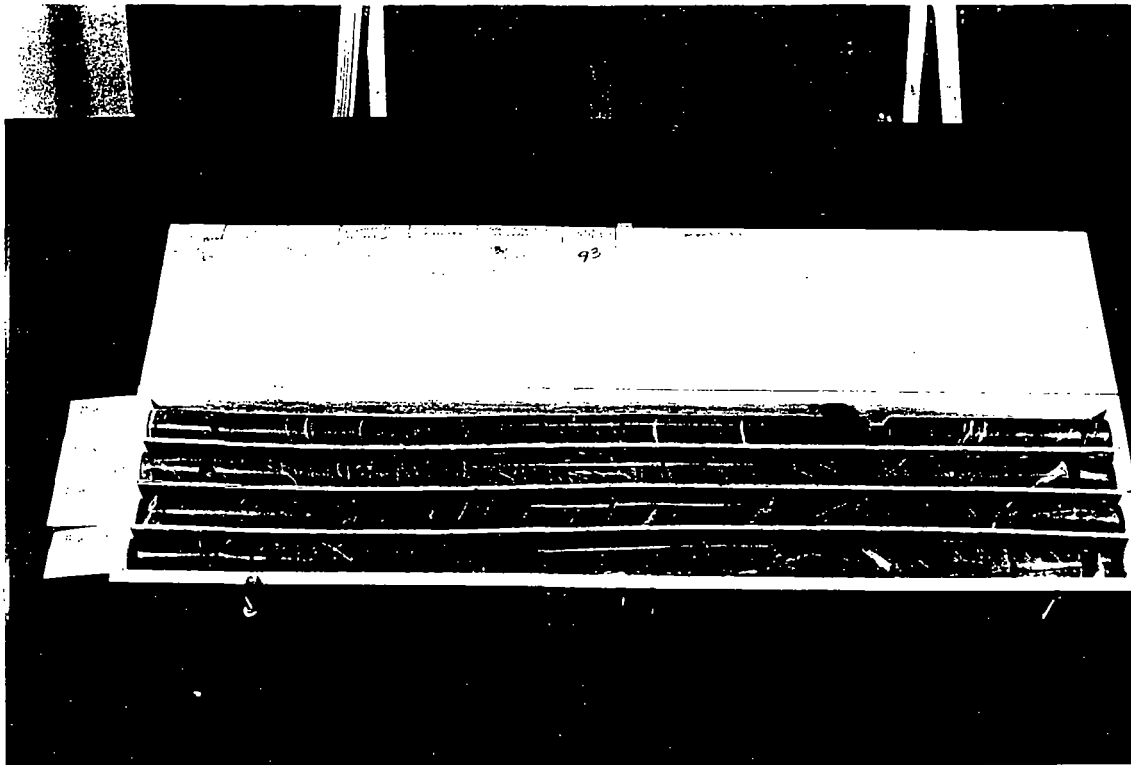
Note: All core oriented top (right) to bottom (left).

PROJECT: <u>Medley Farm RI</u>	JOB NO.: <u>G-8026</u>
LOCATION: <u>Gaffney, South Carolina</u>	DATE CORED: <u>9/2790</u>
CLIENT: <u>Medley Farm Steering Committee</u>	
CONTRACTOR: <u>Environmental Drilling and Services for Phase I</u> <u>Atlanta Testing and Engineering for Phase II</u>	PHOTOGRAPHED BY: <u>E. Olson</u>

CORE BARREL TYPE: <u>HQ - Split Inner Barrel</u>	CORE DIAMETER: <u>3.8 in.</u>
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BORING NO.	RUN NO.	DEPTH OF RUN (FT.)		RECOVERY		RQD	
		FROM:	TO:	INCHES	%	INCHES	%
BW 110	C1	64.1	66.27	7.2	27	0	0
	C2	66.27	71.27	60	100	39.6	66
	C3	71.27	76.27	60	100	32.4	54
	C4	76.27	81.27	60	100	55.2	92
	C5	81.27	84.50	36.6	94	36.6	94

ROCK CORE PHOTOGRAPHY



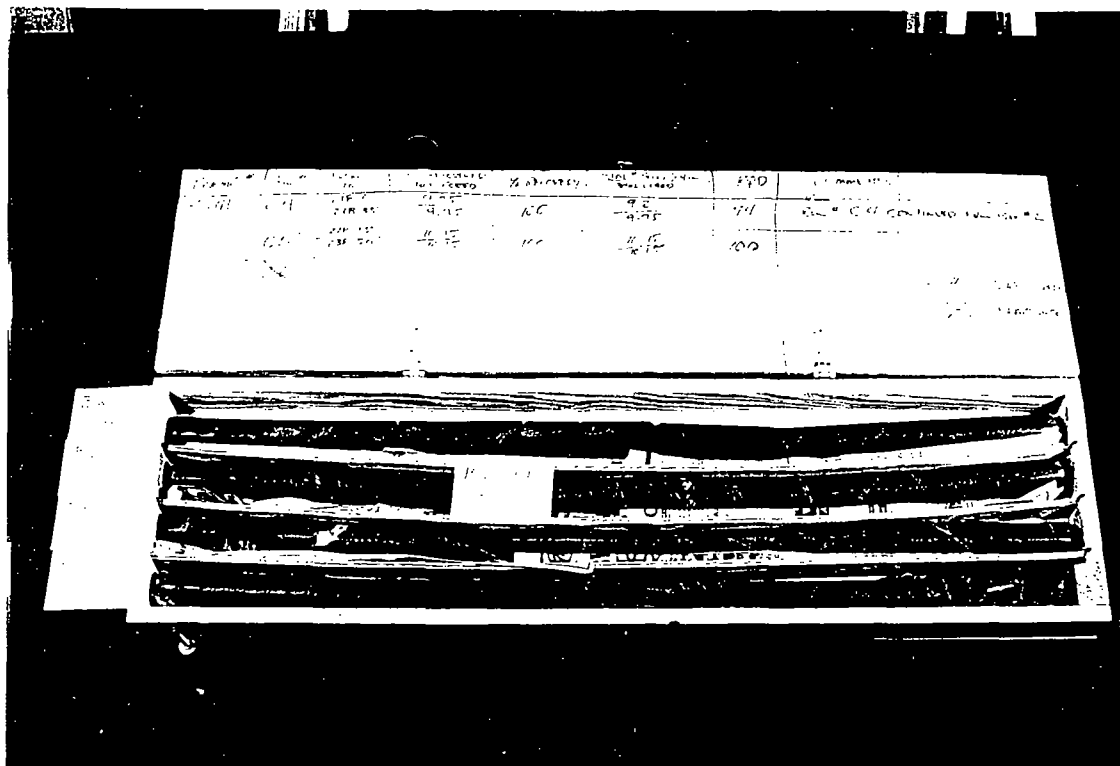
Note: All core oriented top (right) to bottom (left).

PROJECT: Medley Farm RI
LOCATION: Gaffney, South Carolina
CLIENT: Medley Farm Steering Committee
CONTRACTOR: Environmental Drilling and Services for Phase I
Atlanta Testing and Engineering for Phase II

JOB NO.: G-8026
DATE CORED: 10/9/90
PHOTOGRAPHED BY: E. Olson

CORE BARREL TYPE: HQ - Split Inner Barrel CORE DIAMETER: 3.8 in.

BORING NO.	RUN NO.	DEPTH OF RUN (FT.)		RECOVERY		RQD	
		FROM:	TO:	INCHES	%	INCHES	%
BW 111	C1	189	199	120	100	111.6	93
	C2	199	208.6	115.2	100	109.4	95

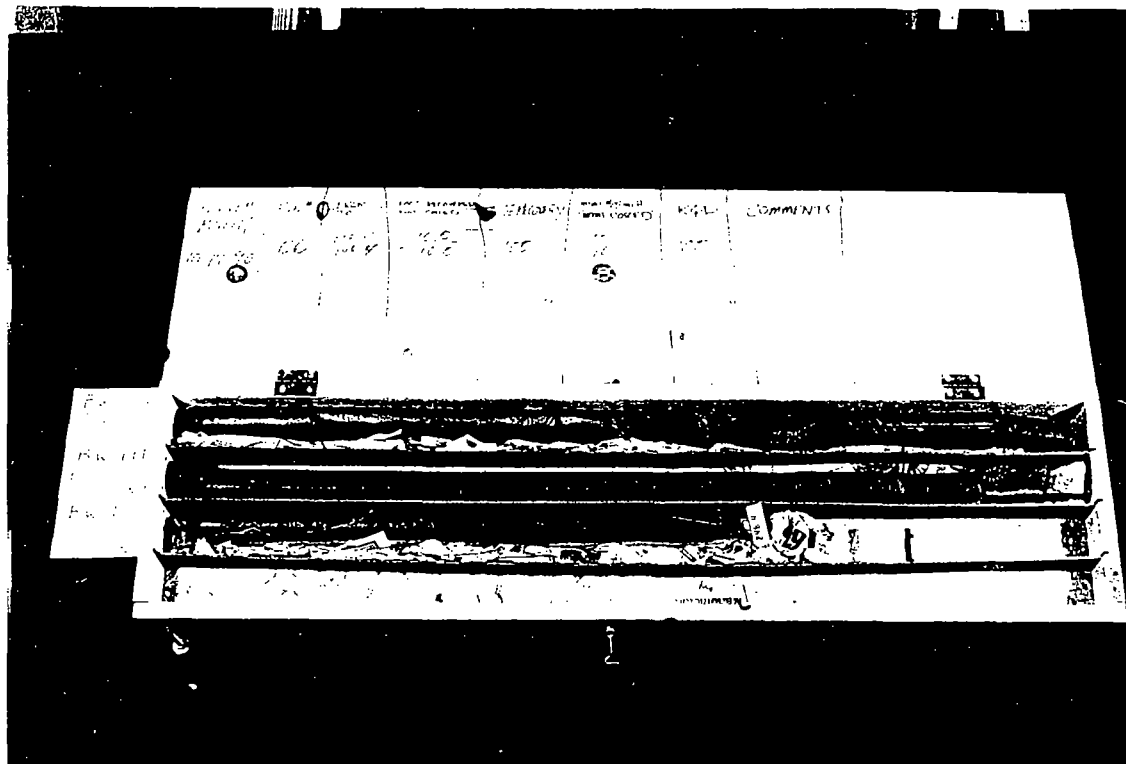


Note: All core oriented top (right) to bottom (left).

PROJECT: <u>Medley Farm RI</u>	JOB NO.: <u>G-8026</u>
LOCATION: <u>Gaffney, South Carolina</u>	DATE CORED: _____
CLIENT: <u>Medley Farm Steering Committee</u>	_____
CONTRACTOR: <u>Environmental Drilling and Services for Phase I</u> <u>Atlanta Testing and Engineering for Phase II</u>	PHOTOGRAPHED BY: <u>E. Olson</u>

CORE BARREL TYPE: NQ - Split Inner Barrel CORE DIAMETER: 1.8 in.

BORING NO.	RUN NO.	DEPTH OF RUN (FT.)		RECOVERY		RQD	
		FROM:	TO:	INCHES	%	INCHES	%
BW 111	C4	218.6	228.35	117	100	110	94
	C5	228.35	238.5	121.8	100	121.8	100



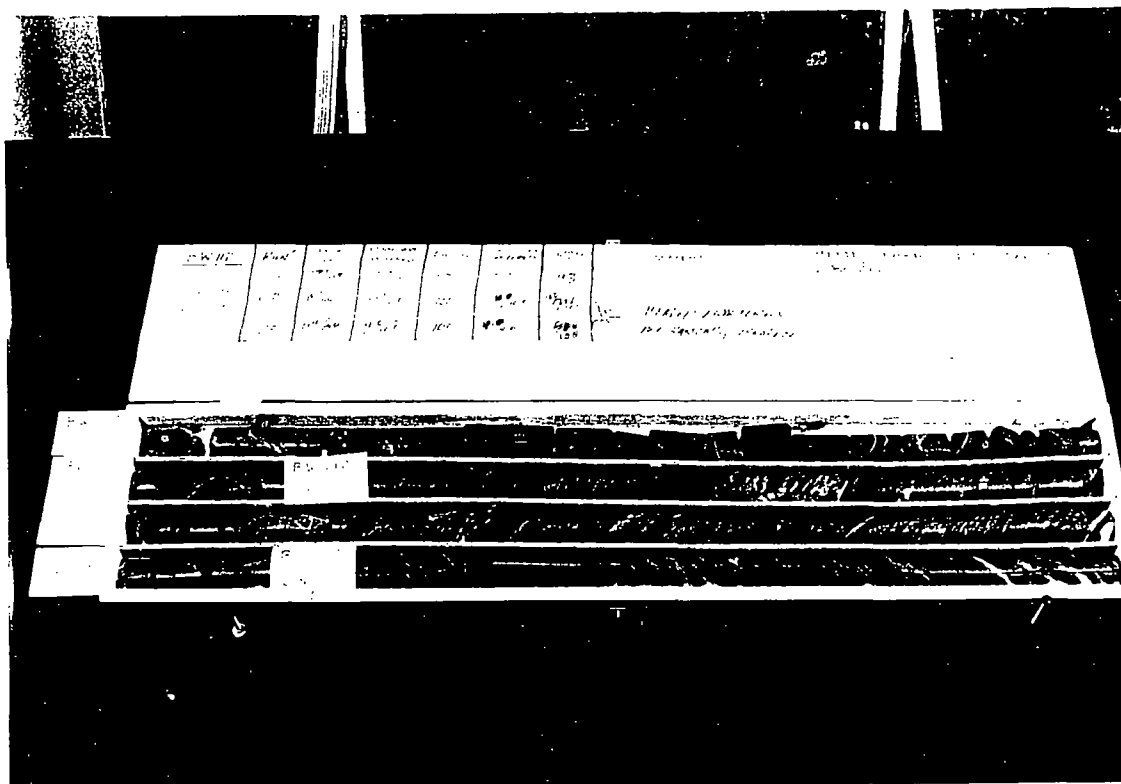
Note: All core oriented top (right) to bottom (left).

PROJECT: <u>Medley Farm RI</u>	JOB NO.: <u>G-8026</u>
LOCATION: <u>Gaffney, South Carolina</u>	DATE CORED: <u>10/9/90</u>
CLIENT: <u>Medley Farm Steering Committee</u>	
CONTRACTOR: <u>Environmental Drilling and Services for Phase I</u> <u>Atlanta Testing and Engineering for Phase II</u>	PHOTOGRAPHED BY: <u>E. Olson</u>

CORE BARREL TYPE: NQ - Split Inner Barrel CORE DIAMETER: 1.8 in.

BORING NO.	RUN NO.	DEPTH OF RUN (FT.)		RECOVERY		RQD	
		FROM:	TO:	INCHES	%	INCHES	%
BW 111	C6	238.4	248.4	120	100	120	100

ROCK CORE PHOTOGRAPHY



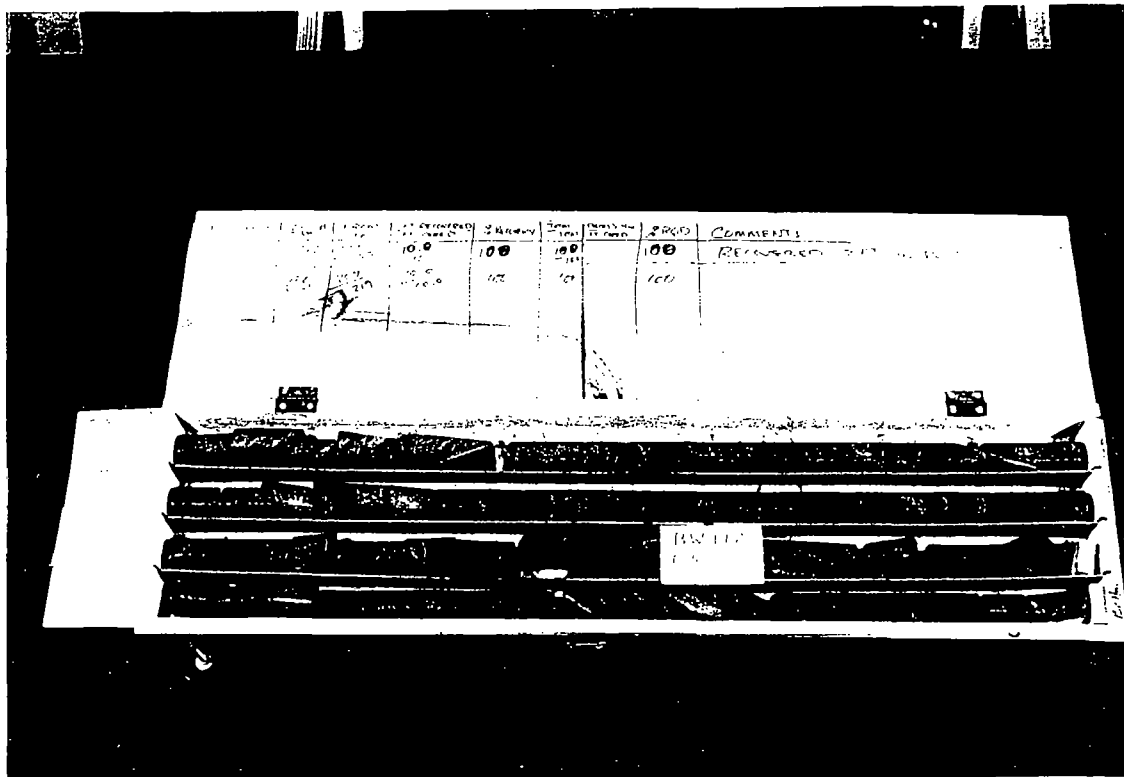
Note: All core oriented top (right) to bottom (left).

PROJECT: <u>Medley Farm RI</u>	JOB NO.: <u>G-8026</u>
LOCATION: <u>Gaffney, South Carolina</u>	DATE CORED: <u>10/9/90</u>
CLIENT: <u>Medley Farm Steering Committee</u>	
CONTRACTOR: <u>Environmental Drilling and Services for Phase I</u> <u>Atlanta Testing and Engineering for Phase II</u>	PHOTOGRAPHED BY: <u>E. Olson</u>

CORE BARREL TYPE: <u>HQ - Split Inner Barrel</u>	CORE DIAMETER: <u>3.8 in.</u>
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BORING NO.	RUN NO.	DEPTH OF RUN (FT.)		RECOVERY		RQD	
		FROM:	TO:	INCHES	%	INCHES	%
BW 112	C1	179	185	69.6	97	64.7	93
	C2	185	195	120	100	88.8	74
	C3	195	199	48	100	41.28	86

ROCK CORE PHOTOGRAPHY



Note: All core oriented top (right) to bottom (left).

PROJECT: Medley Farm RI

LOCATION: Gaffney, South Carolina

CLIENT: Medley Farm Steering Committee

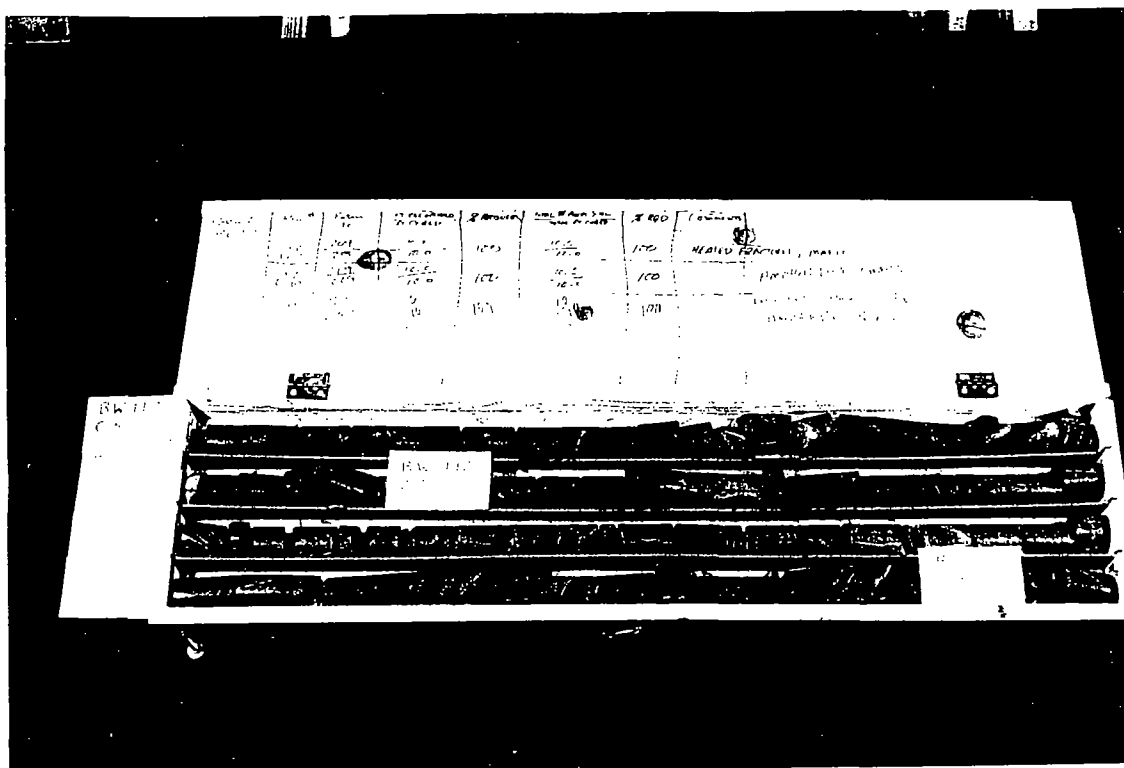
CONTRACTOR: Environmental Drilling and Services for Phase I
Atlanta Testing and Engineering for Phase II

JOB NO.: G-8026
DATE CORED: 10/11-25/90
PHOTOGRAPHED BY: E. Olson

CORE BARREL TYPE: NQ - Split Inner Barrel CORE DIAMETER: 1.8 in.

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ROCK CORE PHOTOGRAPHY



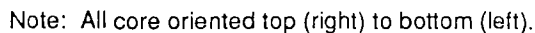
Note: All core oriented top (right) to bottom (left).

PROJECT: Medley Farm RI
LOCATION: Gaffney, South Carolina
CLIENT: Medley Farm Steering Committee
CONTRACTOR: Environmental Drilling and Services for Phase I
Atlanta Testing and Engineering for Phase II

JOB NO.: G-8026
DATE CORED: 10/11-25/90
PHOTOGRAPHED BY: E. Olson

CORE BARREL TYPE: NQ - Split Inner Barrel CORE DIAMETER: 1.8 in.

BORING NO.	RUN NO.	DEPTH OF RUN (FT.)		RECOVERY		RQD	
		FROM:	TO:	INCHES	%	INCHES	%
BW 112	C5 (cont.)	209	219	120	100	120	100
	C6	219	229	120	100	120	100
	C7	229	239	120	100	120	100



CORE BARREL TYPE: NQ - Split Inner Barrel CORE DIAMETER: 1.8 in.

BORING NO.	RUN NO.	DEPTH OF RUN (FT.)		RECOVERY		RQD	
		FROM:	TO:	INCHES	%	INCHES	%
BW 112	C7	229	239	120	100	120	100